



# INTERMEDIATE STATE PERMIT TO OPERATE

Under the authority of RSMo 643 and the Federal Clean Air Act the applicant is authorized to operate the air contaminant source(s) described below, in accordance with the laws, rules, and conditions set forth here in.

**Intermediate Operating Permit Number:**

**Expiration Date:**

**Installation ID:** 047-0012

**Project Number:** 2005-05-099

**Installation Name and Address**

Cook Composites and Polymers Co.  
920 East 14th Avenue  
North Kansas City, MO 64116  
Clay County

**Parent Company's Name and Address**

Cook Composites and Polymers Co.  
PO Box 419389  
Kansas City, MO 64141-6389

**Installation Description:**

Cook Composites and Polymers Company produces resins, gel coats, and powder coatings using a batch production process. The installation has taken a voluntary limit on HAPs in order to stay below the major source threshold.

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Effective Date

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Director or Designee  
Department of Natural Resources

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# I. Installation Description and Equipment Listing

## INSTALLATION DESCRIPTION

Cook Composites and Polymers Company produces resins, gel coats, and powder coatings using a batch production process. The installation has taken a voluntary limit on HAPs in order to stay below the major source threshold.

There are three major classifications of resins that may be produced at the installation: saturated and unsaturated polyester, alkyds and epoxy. In general, the resins are formed by the combination of organic acids and alcohols in the presence of heat. The resin may be thinned, and additional chemicals added to obtain the desired physical properties. Gel coat uses resin as a base material with pigments, fillers and additives introduced to obtain the desired physical properties. Reaction water is generated as a by-product of the resin production process and is managed off-site. The finished products are filtered and then distributed in 55 gallon drums, totes, or tanker trucks.

The typical powder coating production process begins by introducing dibasic acid and polyfunctional alcohol into the reactor. Materials are then reacted under heat and agitation to form the desired resin. After the resin has reached the desired specifications, it is filtered, solidified, and converted to flakes or powder. The final product is packaged in 50-pound bags or super sacks for shipping.

| Reported Air Pollutant Emissions, tons per year |                                                |                                     |                                       |                                     |                         |              |                                    |
|-------------------------------------------------|------------------------------------------------|-------------------------------------|---------------------------------------|-------------------------------------|-------------------------|--------------|------------------------------------|
| Year                                            | Particulate Matter<br>≤ Ten Microns<br>(PM-10) | Sulfur Oxides<br>(SO <sub>x</sub> ) | Nitrogen Oxides<br>(NO <sub>x</sub> ) | Volatile Organic Compounds<br>(VOC) | Carbon Monoxide<br>(CO) | Lead<br>(Pb) | Hazardous Air Pollutants<br>(HAPs) |
| 2005                                            | 6.45                                           | 0.0498                              | 9.09                                  | 16.1                                | 6.97                    | --           | 14.45                              |
| 2004                                            | 6.05                                           | 0.0500                              | 8.26                                  | 17.2                                | 5.79                    | --           | 14.45                              |
| 2003                                            | 5.48                                           | 0.0426                              | 8.22                                  | 17.0                                | 5.42                    | --           | 14.41                              |
| 2002                                            | 5.98                                           | 0.0400                              | 7.99                                  | 17.6                                | 5.26                    | --           | 14.86                              |
| 2001                                            | 5.92                                           | 0.0200                              | 8.23                                  | 16.5                                | 2.06                    | --           | 5.02                               |

## EMISSION UNITS WITH LIMITATIONS

The following list provides a description of the equipment at this installation that emit air pollutants and are identified as having unit-specific emission limitations.

| Emission Unit # | Description of Emission Unit     | Capacity      |
|-----------------|----------------------------------|---------------|
| EU0010          | Natural Gas Fired Boiler (#1)    | 21.9 MMBtu/hr |
| EU0020          | Natural Gas Fired Boiler (#2)    | 21.9 MMBtu/hr |
| EU0030          | Kettle Furnace – 84              | 4 MMBtu/hr    |
| EU0040          | Kettle Furnace – 86              | 4 MMBtu/hr    |
| EU0050          | Resin Reactor                    | 4,000 Gal     |
| EU0060          | Resin Reactor                    | 4,000 Gal     |
| EU0070          | Resin Thin Tank                  | 8,000 Gal     |
| EU0080          | Resin Thin Tank                  | 8,000 Gal     |
| EU0090          | Resin/Gel Coat Base Storage Tank | 6,000 Gal     |
| EU0100          | Resin/Gel Coat Base Storage Tank | 6,000 Gal     |

|        |                                           |            |
|--------|-------------------------------------------|------------|
| EU0110 | Resin/Gel Coat Base Storage Tank          | 6,000 Gal  |
| EU0120 | Resin/Gel Coat Base Storage Tank          | 6,000 Gal  |
| EU0130 | Resin/Gel Coat Base Storage Tank          | 6,000 Gal  |
| EU0140 | Resin/Gel Coat Base Storage Tank          | 9,458 Gal  |
| EU0150 | Resin/Gel Coat Base Storage Tank          | 6,322 Gal  |
| EU0160 | Resin/Gel Coat Base Storage Tank          | 6,322 Gal  |
| EU0170 | Resin/Gel Coat Base Storage Tank          | 2,500 Gal  |
| EU0180 | Resin/Gel Coat Base Storage Tank          | 2,500 Gal  |
| EU0190 | Resin/Gel Coat Base Storage Tank          | 9,458 Gal  |
| EU0200 | Methyl Methacrylate Storage Tank          | 9,000 Gal  |
| EU0210 | Methyl Methacrylate Storage Tank          | 9,000 Gal  |
| EU0220 | Methyl Methacrylate Storage Tank          | 9,000 Gal  |
| EU0230 | Xylene Storage Tank                       | 21,000 Gal |
| EU0240 | Propylene Glycol Storage Tank             | 8,000 Gal  |
| EU0250 | Propylene Glycol Storage Tank             | 8,000 Gal  |
| EU0260 | Propylene Glycol Storage Tank             | 8,200 Gal  |
| EU0270 | Diethylene Glycol Storage Tank            | 8,500 Gal  |
| EU0280 | Diethylene Glycol Storage Tank            | 8,500 Gal  |
| EU0290 | Diethylene Glycol Storage Tank            | 8,500 Gal  |
| EU0300 | Dipropylene Glycol Storage Tank           | 8,500 Gal  |
| EU0310 | Propylene Glycol Storage Tank             | 8,500 Gal  |
| EU0320 | Propylene Glycol Storage Tank             | 8,500 Gal  |
| EU0330 | Propylene Glycol Storage Tank             | 8,500 Gal  |
| EU0340 | Maleic Anhydride Storage Tank             | 14,000 Gal |
| EU0350 | Dibasic Ester Storage Tank                | 5,200 Gal  |
| EU0360 | BYK A-500 Small Storage Tote              | 350 Gal    |
| EU0370 | DMPS Copolymer Small Storage Tote         | 350 Gal    |
| EU0380 | Intermediate Small Storage Tote           | 350 Gal    |
| EU0390 | Sorbitan Monoleate Small Storage Tote     | 350 Gal    |
| EU0400 | Intermediate Small Storage Tote           | 350 Gal    |
| EU0410 | Silicon Resin Solution Small Storage Tote | 350 Gal    |
| EU0420 | Intermediate Small Storage Tote           | 350 Gal    |
| EU0430 | Quaternary Ammonium Small Storage Tote    | 350 Gal    |
| EU0440 | Intermediate Small Storage Tote           | 350 Gal    |
| EU0450 | Colbalt Drier (12%) Small Storage Tote    | 350 Gal    |
| EU0460 | Ethylene Glycol Small Storage Tote        | 350 Gal    |
| EU0470 | DMMA Small Storage Tote                   | 350 Gal    |
| EU0480 | Glycol Storage Tank                       | 8,179 Gal  |
| EU0490 | Glycol Storage Tank                       | 8,179 Gal  |
| EU0500 | Glycol Storage Tank                       | 8,179 Gal  |
| EU0510 | Glycol Storage Tank                       | 8,179 Gal  |
| EU0520 | Glycol Storage Tank                       | 8,179 Gal  |
| EU0530 | Glycol Storage Tank                       | 8,221 Gal  |
| EU0540 | Glycol Storage Tank                       | 8,221 Gal  |
| EU0550 | Glycol Storage Tank                       | 8,221 Gal  |
| EU0560 | Glycol Storage Tank                       | 8,221 Gal  |
| EU0570 | Glycol Storage Tank                       | 8,221 Gal  |

|        |                                     |            |
|--------|-------------------------------------|------------|
| EU0580 | Glycol Storage Tank                 | 8,179 Gal  |
| EU0590 | Glycol Storage Tank                 | 3,948 Gal  |
| EU0600 | Glycol Storage Tank                 | 3,948 Gal  |
| EU0610 | Glycol Storage Tank                 | 1,765 Gal  |
| EU0620 | Glycol Storage Tank                 | 692 Gal    |
| EU0630 | Glycol Storage Tank                 | 692 Gal    |
| EU0640 | Styrene Storage Tank                | 35,000 Gal |
| EU0650 | Methyl Methacrylate Storage Tank    | 13,000 Gal |
| EU0660 | Neopentyl Glycol (90%) Storage Tank | 15,000 Gal |
| EU0670 | Neopentyl Glycol (90%) Storage Tank | 15,000 Gal |
| EU0680 | Gel Coat Colorant Dispersion Tank   | 1,100 Gal  |
| EU0690 | Gel Coat Colorant Dispersion Tank   | 1,100 Gal  |
| EU0700 | Gel Coat Portable Tank Dispersion   | 250 Gal    |
| EU0710 | Gel Coat Portable Tank Dispersion   | 250 Gal    |
| EU0720 | Gel Coat Portable Tank Dispersion   | 250 Gal    |
| EU0730 | Gel Coat Portable Tank Dispersion   | 250 Gal    |
| EU0740 | Gel Coat Portable Tank Dispersion   | 250 Gal    |
| EU0750 | Gel Coat Portable Tank Dispersion   | 250 Gal    |
| EU0760 | Gel Coat Drum Dispersion            | 55 Gal     |
| EU0770 | Gel Coat Drum Dispersion            | 55 Gal     |
| EU0780 | Gel Coat Drum Dispersion            | 55 Gal     |
| EU0790 | Gel Coat Air Mixer – Pails          | 5 Gal      |
| EU0800 | Gel Coat Air Mixer – Pails          | 5 Gal      |
| EU0810 | Gel Coat Air Mixer – Pails          | 5 Gal      |
| EU0820 | Gel Coat Air Mixer – Pails          | 5 Gal      |
| EU0830 | Gel Coat Air Mixer – Pails          | 5 Gal      |
| EU0840 | Gel Coat Air Mixer – Pails          | 5 Gal      |
| EU0850 | Gel Coat Dispersion Tank            | 660 Gal    |
| EU0860 | Neutral Gel Coat Dispersion Tank    | 660 Gal    |
| EU0870 | Gel Coat Dispersion Tank            | 2,000 Gal  |
| EU0880 | Gel Coat Drum Dispersion            | 55 Gal     |
| EU0890 | Gel Coat Drum Dispersion            | 55-250 Gal |
| EU0900 | Neutral Gel Coat Dispersion Tank    | 1,100 Gal  |
| EU0910 | Neutral Gel Coat Dispersion Tank    | 1,100 Gal  |
| EU0920 | Gel Coat Dispersion Tank            | 440 Gal    |
| EU0930 | Gel Coat Dispersion Tank            | 440 Gal    |
| EU0940 | Gel Coat Dispersion Tank            | 550 Gal    |
| EU0950 | Gel Coat Dispersion Tank            | 550 Gal    |
| EU0960 | Gel Coat Dispersion Tank            | 550 Gal    |
| EU0970 | Gel Coat Dispersion Tank            | 550 Gal    |
| EU0980 | Gel Coat Dispersion Tank            | 550 Gal    |
| EU0990 | Gel Coat Dispersion Tank            | 550 Gal    |
| EU1000 | Gel Coat Dispersion Tank            | 2,400 Gal  |
| EU1010 | Gel Coat Dispersion Tank            | 2,400 Gal  |
| EU1020 | Gel Coat Dispersion Tank            | 2,150 Gal  |
| EU1030 | Gel Coat Dispersion Tank            | 2,150 Gal  |
| EU1040 | Gel Coat Storage Tank               | 4,400 Gal  |

|        |                               |               |
|--------|-------------------------------|---------------|
| EU1050 | Gel Coat Storage Tank         | 4,400 Gal     |
| EU1060 | Gel Coat Storage Tank         | 4,400 Gal     |
| EU1070 | Gel Coat Storage Tank         | 4,400 Gal     |
| EU1080 | Gel Coat Dispersion Tank (60) | 3,300 Gal     |
| EU1090 | Gel Coat Dispersion Tank (90) | 5,000 Gal     |
| EU1100 | Gel Coat Dispersion Tank (60) | 3,300 Gal     |
| EU1110 | Gel Coat Dispersion Tank (90) | 5,000 Gal     |
| EU1120 | Gel Coat Dispersion Tank      | 550 Gal       |
| EU1130 | Gel Coat Dispersion Tank      | 715 Gal       |
| EU1140 | Gel Coat Dispersion Tank      | 550 Gal       |
| EU1150 | Gel Coat Dispersion Tank      | 715 Gal       |
| EU1160 | Gel Coat Dispersion Tank      | 1,100 Gal     |
| EU1170 | Gel Coat Dispersion Tank      | 1,100 Gal     |
| EU1180 | Gel Coat Dispersion Tank      | 1,100 Gal     |
| EU1190 | Gel Coat Dispersion Tank      | 1,100 Gal     |
| EU1200 | Gel Coat Dispersion Tank      | 440 Gal       |
| EU1210 | Gel Coat Dispersion Tank      | 550 Gal       |
| EU1220 | Gel Coat Dispersion Tank      | 550 Gal       |
| EU1230 | Gel Coat Dispersion Tank      | 550 Gal       |
| EU1240 | Gel Coat Dispersion Tank      | 550 Gal       |
| EU1250 | Gel Coat Dispersion Tank      | 550 Gal       |
| EU1260 | Gel Coat Dispersion Tank      | 550 Gal       |
| EU1270 | Gel Coat Dispersion Tank      | 550 Gal       |
| EU1280 | Gel Coat Dispersion Tank      | 550 Gal       |
| EU1290 | Gel Coat Dispersion Tank      | 715 Gal       |
| EU1300 | Gel Coat Dispersion Tank      | 550 Gal       |
| EU1310 | Gel Coat Dispersion Tank      | 715 Gal       |
| EU1320 | Powder Coatings Reactor       | 4,500 Gal     |
| EU1330 | Powder Coatings Reactor       | 8,400 Gal     |
| EU1340 | Crusher #1                    | 9,912 Lbs/hr  |
| EU1350 | Finished Product Silo         | 10,000 Gal    |
| EU1360 | Finished Product Silo         | 10,000 Gal    |
| EU1370 | Packing Machine Bags          | 700 Bags/hr   |
| EU1380 | Super Sack Filling Machine    | 45,000 Lbs/hr |
| EU1390 | Reaction Water Storage Tank   | 19,000 Gal    |
| EU1400 | Hot Oil Heater                | 12 MMBtu/hr   |
| EU1410 | Small Batch Packaging Area    |               |
| EU1420 | Big Batch Packaging Area      |               |
| EU1430 | Tanker Truck Loading          |               |
| EU1440 | Port Washer                   |               |
| EU1450 | Resin Reactor                 | 60 Gal        |
| EU1460 | Resin Reactor                 | 10 Gal        |
| EU1470 | Resin Thin Tank               | 120 Gal       |
| EU1480 | Resin Thin Tank               | 120 Gal       |
| EU1490 | Resin Thin Tank               | 20 Gal        |
| EU1500 | Monomer Feed Tank             | 48 Gal        |
| EU1510 | Monomer Feed Tank             | 48 Gal        |

|        |                     |        |
|--------|---------------------|--------|
| EU1520 | Monomer Feed Tank   | 8 Gal  |
| EU1530 | Monomer Feed Tank   | 8 Gal  |
| EU1540 | Catalyst Feed Tank  | 6 Gal  |
| EU1550 | Catalyst Feed Tank  | 1 Gal  |
| EU1560 | Emergency Generator | 587 Hp |

### EMISSION UNITS WITHOUT LIMITATIONS

The following list provides a description of the equipment that does not have unit specific limitations at the time of permit issuance.

| Description of Emission Source          | Capacity    |
|-----------------------------------------|-------------|
| Thermaclean <sup>TM</sup> Reactor       | 1,500 Gal   |
| Thermaclean <sup>TM</sup> Reactor       | 2,500 Gal   |
| Thermaclean <sup>TM</sup> Blending Tank | 1,084 Gal   |
| Thermaclean <sup>TM</sup> Blending Tank | 585 Gal     |
| Thermaclean <sup>TM</sup> Blending Tank | 55 Gal      |
| Sanitary Waste Water Storage Tank       | 201,000 Gal |
| Sanitary Waste Water Storage Tank       | 201,000 Gal |
| Powder Coatings Cooling/Flaking Belt    | 9,912 Lb/hr |
| Quality Assurance Laboratory            |             |

### DOCUMENTS INCORPORATED BY REFERENCE

These documents have been incorporated by reference into this permit.

- 1) Construction Permit #052000-007
- 2) Construction Permit #082001-020
- 3) Construction Permit Amendment #052000-007A



## II. Plant Wide Emission Limitations

The installation shall comply with each of the following emission limitations. Consult the appropriate sections in the Code of Federal Regulations (CFR) and Code of State Regulations (CSR) for the full text of the applicable requirements. All citations, unless otherwise noted, are to the regulations in effect as of the date that this permit is issued.

### Permit Condition PW001

10 CSR 10-6.065

#### **Operating Permits**

Voluntary Permit Condition and Construction Permit #052000-007A

#### **Emission Limitations:**

- 1) The installation shall emit less than 10 tons of any individual Hazardous Air Pollutant (HAP) in any consecutive 12-month period.
- 2) The installation shall emit less than 25 tons of combined HAPs in any consecutive 12-month period.

#### **Monitoring/Recordkeeping:**

- 1) The permittee shall calculate and record facility-wide emissions of the following HAPs on a rolling 12-month basis:
  - a) Styrene
  - b) Methyl Methacrylate
- 2) The permittee shall maintain calculations demonstrating that facility-wide emissions are below 25 tons of combined HAPs (see Attachment D).
- 3) All records shall be maintained onsite for a minimum of five (5) years and shall be made available to Department of Natural Resources personnel upon request.

#### **Reporting:**

The permittee shall report to the Air Pollution Control Program, Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than ten (10) days after any exceedance of any of the terms imposed by this regulation. Any deviations from this permit condition shall be reported in the annual compliance certification, as required by 10 CSR 10-6.065(5)(C)1.B.

### Permit Condition PW002

10 CSR 10-6.060

#### **Construction Permits Required (#052000-007A)**

#### **Odor Limitation:**

If a continuing situation of demonstrated nuisance of odors exists in violation of 10 CSR 10-2.070, the Director may require the permittee to submit a corrective action plan within ten (10) days to adequately mitigate the odors. The permittee shall implement any such plan immediately upon its approval by the Director. Failure to either submit or implement such a plan will be a violation of this permit.

**Reporting:**

The permittee shall report any deviations or exceedances of this permit condition to the Air Pollution Control Program, Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than the annual compliance certification, as required by 10 CSR 10-6.065(5)(C)1.B.

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### III. Emission Unit Specific Emission Limitations

The installation shall comply with each of the following emission limitations. Consult the appropriate sections in the Code of Federal Regulations (CFR) and Code of State Regulations (CSR) for the full text of the applicable requirements. All citations, unless otherwise noted, are to the regulations in effect as of the date that this permit is issued.

#### Combustion Equipment

#### EU0010 – EU0040

| Emission Unit | EIQ Reference (2005) | Unit Description              | Capacity      |
|---------------|----------------------|-------------------------------|---------------|
| EU0010        | EP04                 | Natural Gas Fired Boiler (#1) | 21.9 MMBtu/hr |
| EU0020        | EP05                 | Natural Gas Fired/Boiler (#2) | 21.9 MMBtu/hr |
| EU0030        | EP01                 | Kettle Furnace – 84           | 4 MMBtu/hr    |
| EU0040        | EP02                 | Kettle Furnace – 86           | 4 MMBtu/hr    |

#### Permit Condition EU0010-001 through EU0020-001

10 CSR 10-2.040

**Maximum Allowable Emission of Particulate Matter from Fuel Burning Equipment Used for Indirect Heating**

#### Emission Limitation:

The permittee shall not emit particulate matter from these emission units in excess of 0.39 pounds per million BTU of heat input.

#### Operational Limitation/Equipment Specifications:

These emission units shall be limited to burning pipeline grade natural gas.

#### Monitoring/Record Keeping:

- 1) The permittee shall maintain calculations at the installation demonstrating compliance with this rule (see Attachment A).
- 2) The calculations shall be kept onsite and be made available to Department of Natural Resources' personnel upon request.

#### Reporting:

The permittee shall report any deviations or exceedances of this permit condition to the Air Pollution Control Program, Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than the annual compliance certification, as required by 10 CSR 10-6.065(5)(C)1.B.

**Resin Production**  
EIQ Reference (2005): EP18

**EU0050 – EU0080**

| Emission Unit | Equipment ID | Location       | Unit Description | Volume (gal) |
|---------------|--------------|----------------|------------------|--------------|
| EU0050        | 70K8400      | Kettle Room    | Resin Reactor    | 4,000        |
| EU0060        | 70K8600      | Kettle Room    | Resin Reactor    | 4,000        |
| EU0070        | 70T8401      | Thin Tank Room | Resin Thin Tank  | 8,000        |
| EU0080        | 70T8601      | Thin Tank Room | Resin Thin Tank  | 8,000        |

**Permit Condition EU0050-001 through EU0080-001**

July 29, 1994 Amended Consent Agreement  
(supercedes July 1991 Stipulation and Consent Order)

**Emission Limitation:**

- 1) The permittee shall limit VOC emissions from resin production to 0.97 tons/month.
- 2) Should VOC emissions from resin production at the North Kansas City installation exceed 0.97 tons/month due to an act of God or act of war, it shall not be a violation of this Amended Consent Agreement.

**Monitoring/Recordkeeping:**

- 1) The permittee shall monitor the monthly resin production.
- 2) The permittee shall maintain good operating and maintenance practices on the resin production process and the control devices.
- 3) The permittee shall maintain monthly records of the VOC emissions from the resin production.
- 4) The permittee shall maintain records showing any period of time when the control(s) were not operational during a period of resin production.
- 5) All records shall be maintained onsite for a minimum of five (5) years and shall be made available to Department of Natural Resources personnel upon request.

**Reporting:**

The permittee shall report to the Air Pollution Control Program, Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than ten (10) days after any exceedance of any of the terms imposed by this regulation, or any malfunction which causes an exceedance of this regulation. Any deviations from this permit condition shall be reported in the annual compliance certification, as required by 10 CSR 10-6.065(5)(C)1.B.

**Permit Condition EU0050-002 through EU0080-002**

10 CSR 10-2.300

**Control of Emissions from the Manufacturing of Paints, Varnishes Lacquers, Enamels, and Other Allied Surface Coating Products**

**Operational Requirements:**

- 1) Covers shall be installed and maintained on all open-top tanks or vessels used for the production of non-waterbase coating products. These covers shall remain closed except when production, sampling, maintenance or inspection procedures require operator access.
- 2) The polymerization of synthetic resin shall be done in a completely enclosed operation with the VOC emissions controlled by the use of the thermal oxidizer.
- 3) The permittee shall operate the thermal oxidizer at all times during the operation of the resin reactors or resin thin tanks (this requirement excludes periods of startup, shutdown and malfunction).
- 4) The permittee shall maintain a minimum overall destruction efficiency of VOCs of 98% for the thermal oxidizer.

**Monitoring:**

- 1) The permittee shall conduct performance testing on the thermal oxidizer once every five years or once per Title V permit term.
- 2) The permittee shall continuously monitor and maintain a minimum chamber temperature of 1400°F on the thermal oxidizer.
- 3) Accuracy of the thermocouple in the thermal oxidizer chamber will be verified by a second, or redundant thermocouple probe inserted into the chamber with a hand held meter. This validation check will be conducted a minimum of once per calendar year. The difference between the reading of the two thermocouples shall not exceed  $\pm 30^{\circ}\text{F}$ .
- 4) The permittee shall initiate procedures for corrective action within twenty-four (24) hours of detection of an operating malfunction of the thermal oxidizer.

**Performance Testing:**

- 1) The VOC control efficiency shall be determined by the testing methods referenced in 10 CSR 10-6.030(14)(A) – 40 CFR Part 60, Appendix A – Test Methods, Method 25 – Determination of Total Gaseous Non-methane Organic Emissions as Carbon. The same method shall be used to sample emissions from alternate control measures subject to the director's review in subsection (4)(A).
- 2) The date on which performance tests are conducted must be prearranged with the Air Pollution Control Program a minimum of 30 days prior to the proposed test date so that the Program may arrange a pretest meeting, if necessary, and assure that the test date is acceptable for an observer to be present. A completed Proposed Test Plan form may serve the purpose of notification and must be approved by the Air Pollution Control Program prior to conducting the required emission testing.
- 3) The permittee shall conduct performance testing during periods of representative conditions at the maximum process/production rate, or within 10% of this rate, not to include periods of startup, shutdown, or malfunction.
- 4) The permittee shall provide or cause to be provided, performance testing facilities as follows:
  - a) Safe sampling platform(s).
  - b) Safe access to sampling platform(s).
  - c) Utilities for sampling and testing equipment.
  - d) Sampling ports adequate for test methods applicable to this facility. This includes:
    - i) Constructing the air pollution control system such that volumetric flow rates and pollutant emission rates can be accurately determined by applicable test methods and procedures;

- ii) Providing a stack or duct with cyclonic flow averaging less than 20° over all test points during the performance tests as stated in 40 CFR Part 60, Appendix A, Method 1 – Sample and Velocity Traverse for Stationary Sources; and
  - iii) Removal of the port caps 24 hours prior to testing to verify both their removability as well as full-diameter clearance to the stack; caps may be retained hand tight.
- 5) Operating Parameter Limits:
- a) During the performance test for the thermal oxidizer, the permittee shall establish site-specific operating parameter values for the minimum and maximum chamber temperature.
  - b) During the emission test, each operating parameter must be monitored continuously and recorded with sufficient frequency to establish a representative average value for that parameter, but no less frequently than once every fifteen (15) minutes.
  - c) The permittee shall determine the operating parameter monitoring values as the averages of the values recorded during any of the runs for which results are used to establish the control efficiency.
  - d) The permittee may conduct multiple performance tests to establish alternative compliant operating parameter values.
  - e) The permittee may re-establish compliant operating parameter values as part of any performance test that is conducted subsequent to the initial test.

**Recordkeeping:**

- 1) The permittee shall keep records of resin production rates sufficient to determine daily VOC emissions. The permittee shall use the resin production rate records to calculate daily VOC emissions for Department of Natural Resources personnel upon request.
- 2) The permittee shall keep a log of all routine and unscheduled maintenance and repair activities on the thermal oxidizer (see Attachment B).
- 3) The permittee shall keep records of the continuously monitored chamber temperature of the thermal oxidizer.
- 4) The permittee shall record the results of the annual thermocouple testing.
- 5) The permittee shall keep record of the results of the most recent performance test conducted on the thermal oxidizer.
- 6) All records shall be maintained onsite for a minimum of five (5) years and shall be made available to Department of Natural Resources personnel upon request.

**Reporting:**

The permittee shall report to the Air Pollution Control Program, Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than ten (10) days after any exceedance of any of the terms imposed by this regulation, or any malfunction which causes an exceedance of this regulation. Any deviations from this permit condition shall be reported in the annual compliance certification, as required by 10 CSR 10-6.065(5)(C)1.B.

**Product Storage**  
EIQ Reference (2005): EP08

**EU0090 – EU0180**

| Emission Unit | Equipment ID | Location       | Unit Description                 | Volume (gal) |
|---------------|--------------|----------------|----------------------------------|--------------|
| EU0090        | 70B0650      | Big Batch Area | Resin/Gel Coat Base Storage Tank | 6,000        |
| EU0100        | 70B0651      | Big Batch Area | Resin/Gel Coat Base Storage Tank | 6,000        |
| EU0110        | 70B0652      | Big Batch Area | Resin/Gel Coat Base Storage Tank | 6,000        |
| EU0120        | 70B0654      | Big Batch Area | Resin/Gel Coat Base Storage Tank | 6,000        |
| EU0130        | 70B0655      | Big Batch Area | Resin/Gel Coat Base Storage Tank | 6,000        |
| EU0140        | 70B0426      | Building 48    | Resin/Gel Coat Base Storage Tank | 9,458        |
| EU0150        | 70B0427      | Building 48    | Resin/Gel Coat Base Storage Tank | 6,322        |
| EU0160        | 70B0428      | Building 48    | Resin/Gel Coat Base Storage Tank | 6,322        |
| EU0170        | 70S0059      | Building 3     | Resin/Gel Coat Base Storage Tank | 2,500        |
| EU0180        | 70S0064      | Building 3     | Resin/Gel Coat Base Storage Tank | 2,500        |

**Raw Material Storage**  
EIQ Reference (2005): EP14

**EU0190 – EU0670**

| Emission Unit | Equipment ID | Location    | Unit Description                 | Volume (gal) |
|---------------|--------------|-------------|----------------------------------|--------------|
| EU0190        | 70B0425      | Building 27 | Resin/Gel Coat Base Storage Tank | 9,458        |
| EU0200        | 70S0101      | Tank Farm   | Methyl Methacrylate Storage Tank | 9,000        |
| EU0210        | 70S0102      | Tank Farm   | Methyl Methacrylate Storage Tank | 9,000        |
| EU0220        | 70S0103      | Tank Farm   | Methyl Methacrylate Storage Tank | 9,000        |
| EU0230        | 70S0140      | Tank Farm   | Xylene Storage Tank              | 21,000       |

|        |         |                                   |                                             |        |
|--------|---------|-----------------------------------|---------------------------------------------|--------|
| EU0240 | 70S0506 | Building 12                       | Propylene Glycol Storage Tank               | 8,000  |
| EU0250 | 70S0507 | Building 12                       | Propylene Glycol Storage Tank               | 8,000  |
| EU0260 | 70S0511 | Building 12                       | Propylene Glycol Storage Tank               | 8,200  |
| EU0270 | 70S0514 | Building 12                       | Diethylene Glycol Storage Tank              | 8,500  |
| EU0280 | 70S0515 | Building 12                       | Diethylene Glycol Storage Tank              | 8,500  |
| EU0290 | 70S0516 | Building 12                       | Diethylene Glycol Storage Tank              | 8,500  |
| EU0300 | 70S0517 | Building 12                       | Dipropylene Glycol Storage Tank             | 8,500  |
| EU0310 | 70S0518 | Building 12                       | Propylene Glycol Storage Tank               | 8,500  |
| EU0320 | 70S0519 | Building 12                       | Propylene Glycol Storage Tank               | 8,500  |
| EU0330 | 70S0520 | Building 12                       | Propylene Glycol Storage Tank               | 8,500  |
| EU0340 | 70S7001 | Building 27/48                    | Maleic Anhydride Storage Tank               | 14,000 |
| EU0350 | 70S0100 | Building 37/2 <sup>nd</sup> Floor | Dibasic Ester Storage Tank                  | 5,200  |
| EU0360 | 70S2901 | Building 29                       | BYK A-500 Small Storage Tote                | 350    |
| EU0370 | 70S2902 | Building 29                       | DMPS Copolymer Small Storage Tote           | 350    |
| EU0380 | 70S2903 | Building 29                       | Intermediate Small Storage Tote             | 350    |
| EU0390 | 70S2904 | Building 29                       | Sorbitan Monoleate Small Storage Tote       | 350    |
| EU0400 | 70S2905 | Building 29                       | Intermediate Small Storage Tote             | 350    |
| EU0410 | 70S2906 | Building 29                       | Silicone Resin Solution Small Storage Tote  | 350    |
| EU0420 | 70S2907 | Building 29                       | Intermediate Small Storage Tote             | 350    |
| EU0430 | 70S2908 | Building 29                       | Quaternary Ammonium Salt Small Storage Tote | 350    |
| EU0440 | 70S2909 | Building 29                       | Intermediate Small Storage Tote             | 350    |
| EU0450 | 70S2910 | Building 29                       | Colbalt Drier (12%) Small Storage Tote      | 350    |
| EU0460 | 70S2911 | Building 29                       | Ethylene Glycol Small Storage Tote          | 350    |



|        |         |             |                                        |        |
|--------|---------|-------------|----------------------------------------|--------|
| EU0470 | 70S2912 | Building 29 | DMMA<br>Small Storage Tote             | 350    |
| EU0480 | T501    | Building 12 | Glycol<br>Storage Tank                 | 8,179  |
| EU0490 | T502    | Building 12 | Glycol<br>Storage Tank                 | 8,179  |
| EU0500 | T503    | Building 12 | Glycol<br>Storage Tank                 | 8,179  |
| EU0510 | T504    | Building 12 | Glycol<br>Storage Tank                 | 8,179  |
| EU0520 | T505    | Building 12 | Glycol<br>Storage Tank                 | 8,179  |
| EU0530 | T508    | Building 12 | Glycol<br>Storage Tank                 | 8,221  |
| EU0540 | T509    | Building 12 | Glycol<br>Storage Tank                 | 8,221  |
| EU0550 | T510    | Building 12 | Glycol<br>Storage Tank                 | 8,221  |
| EU0560 | T512    | Building 12 | Glycol<br>Storage Tank                 | 8,221  |
| EU0570 | T513    | Building 12 | Glycol<br>Storage Tank                 | 8,221  |
| EU0580 | T521    | Building 12 | Glycol<br>Storage Tank                 | 8,179  |
| EU0590 | T522    | Building 12 | Glycol<br>Storage Tank                 | 3,948  |
| EU0600 | T523    | Building 12 | Glycol<br>Storage Tank                 | 3,948  |
| EU0610 | T524    | Building 12 | Glycol<br>Storage Tank                 | 1,765  |
| EU0620 | T525    | Building 12 | Glycol<br>Storage Tank                 | 692    |
| EU0630 | T526    | Building 12 | Glycol<br>Storage Tank                 | 692    |
| EU0640 | 70S0108 | Tank Farm   | Styrene<br>Storage Tank                | 35,000 |
| EU0650 | 70H0002 | Tank Farm   | Methyl Methacrylate<br>Storage Tank    | 13,000 |
| EU0660 | 70S0733 | Building 53 | Neopentyl Glycol (90%)<br>Storage Tank | 15,000 |
| EU0670 | 70S8054 | Building 53 | Neopentyl Glycol (90%)<br>Storage Tank | 15,000 |

**Permit Condition EU0090-001 through EU0670-001**

10 CSR 10-2.300

**Control of Emissions from the Manufacturing of Paints, Varnishes Lacquers, Enamels, and Other Allied Surface Coating Products**

**Operational Limitation:**

- 1) Stationary VOC storage containers with a capacity greater than two hundred fifty (250) gallons shall be equipped with a submerged-fill pipe or bottom fill, except where more effective air pollution control is used and has been approved by the Air Pollution Control Program. (NOTE: EU0360 – EU0470 are not stationary VOC storage containers.)
- 2) Covers shall be installed on all open-top tanks used for the production of non-waterbase coating products. These covers shall remain closed except when production, sampling, maintenance or inspection procedures require operator access.

**Recordkeeping/Monitoring:**

- 1) The permittee shall maintain records that include the composition and vapor pressure of the materials stored in these tanks and totes.
- 2) The permittee shall maintain records that indicate that each stationary tank is equipped with an approved bottom fill or submerged-fill pipe.
- 3) All records shall be maintained onsite for the life of the source and shall be made available to Department of Natural Resources personnel upon request.

**Reporting:**

The permittee shall report any deviations of this permit condition to the Air Pollution Control Program, Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than the annual compliance certification, as required by 10 CSR 10-6.065(5)(C)1.B.

**Small Batch Area**  
EIQ Reference (2005): EP15

**EU0680 – EU1070**

| Emission Unit | Equipment ID | Location                   | Unit Description                     | Volume (gal) |
|---------------|--------------|----------------------------|--------------------------------------|--------------|
| EU0680        | 70G6201      | Building 3<br>Second Floor | Gel Coat Colorant<br>Dispersion Tank | 1,100        |
| EU0690        | 70G6202      | Building 3<br>Second Floor | Gel Coat Colorant<br>Dispersion Tank | 1,100        |
| EU0700        | 70D7000      | Small Batch Area           | Gel Coat Portable Tank<br>Dispersion | 250          |
| EU0710        | 70D7100      | Small Batch Area           | Gel Coat Portable Tank<br>Dispersion | 250          |
| EU0720        | 70D7200      | Small Batch Area           | Gel Coat Portable Tank<br>Dispersion | 250          |
| EU0730        | 70D7300      | Small Batch Area           | Gel Coat Portable Tank<br>Dispersion | 250          |

|        |         |                          |                                   |        |
|--------|---------|--------------------------|-----------------------------------|--------|
| EU0740 | 70D7400 | Small Batch Area         | Gel Coat Portable Tank Dispersion | 250    |
| EU0750 | 70D7500 | Small Batch Area         | Gel Coat Portable Tank Dispersion | 250    |
| EU0760 | 70D7700 | Small Batch Area         | Gel Coat Drum Dispersion          | 55     |
| EU0770 | 70D7800 | Small Batch Area         | Gel Coat Drum Dispersion          | 55     |
| EU0780 | 70D7900 | Small Batch Area         | Gel Coat Drum Dispersion          | 55     |
| EU0790 | 70Z0001 | Small Batch Area         | Gel Coat Air Mixer – Pails        | 5      |
| EU0800 | 70Z0002 | Small Batch Area         | Gel Coat Air Mixer – Pails        | 5      |
| EU0810 | 70Z0003 | Small Batch Area         | Gel Coat Air Mixer – Pails        | 5      |
| EU0820 | 70Z0004 | Small Batch Area         | Gel Coat Air Mixer – Pails        | 5      |
| EU0830 | 70Z0005 | Small Batch Area         | Gel Coat Air Mixer – Pails        | 5      |
| EU0840 | 70Z0006 | Small Batch Area         | Gel Coat Air Mixer – Pails        | 5      |
| EU0850 | 70G6301 | Building 37 Second Floor | Gel Coat Dispersion Tank          | 660    |
| EU0860 | 70G6302 | Building 37 Second Floor | Neutral Gel Coat Dispersion Tank  | 660    |
| EU0870 | 70G9001 | Building 3 Second Floor  | Gel Coat Dispersion Tank          | 2,000  |
| EU0880 | 70G9101 | Building 3 Second Floor  | Gel Coat Drum Dispersion          | 55     |
| EU0890 | 70G9102 | Building 3 Second Floor  | Gel Coat Drum Dispersion          | 55-250 |
| EU0900 | 70G6001 | Building 3 Second Floor  | Neutral Gel Coat Dispersion Tank  | 1,100  |
| EU0910 | 70G6002 | Building 3 Second Floor  | Neutral Gel Coat Dispersion Tank  | 1,100  |
| EU0920 | 70G6101 | Building 3 Second Floor  | Gel Coat Dispersion Tank          | 440    |
| EU0930 | 70G6102 | Building 3 Second Floor  | Gel Coat Dispersion Tank          | 440    |
| EU0940 | 70G6401 | Building 3 Second Floor  | Gel Coat Dispersion Tank          | 550    |
| EU0950 | 70G6402 | Building 3 Second Floor  | Gel Coat Dispersion Tank          | 550    |
| EU0960 | 70G6403 | Building 3 Second Floor  | Gel Coat Dispersion Tank          | 550    |

|        |         |                            |                             |       |
|--------|---------|----------------------------|-----------------------------|-------|
| EU0970 | 70G6501 | Building 3<br>Second Floor | Gel Coat<br>Dispersion Tank | 550   |
| EU0980 | 70G6502 | Building 3<br>Second Floor | Gel Coat<br>Dispersion Tank | 550   |
| EU0990 | 70G6503 | Building 3<br>Second Floor | Gel Coat<br>Dispersion Tank | 550   |
| EU1000 | 70B0301 | Building 3<br>Second Floor | Gel Coat<br>Dispersion Tank | 2,400 |
| EU1010 | 70B0302 | Building 3<br>Second Floor | Gel Coat<br>Dispersion Tank | 2,400 |
| EU1020 | 70B0303 | Building 3<br>Second Floor | Gel Coat<br>Dispersion Tank | 2,150 |
| EU1030 | 70B0304 | Building 3<br>Second Floor | Gel Coat<br>Dispersion Tank | 2,150 |
| EU1040 | 70B0067 | Building 3                 | Gel Coat<br>Storage Tank    | 4,400 |
| EU1050 | 70B0068 | Building 3                 | Gel Coat<br>Storage Tank    | 4,400 |
| EU1060 | 70B0069 | Building 3                 | Gel Coat<br>Storage Tank    | 4,400 |
| EU1070 | 70B0070 | Building 3                 | Gel Coat<br>Storage Tank    | 4,400 |

**Permit Condition EU0680-001 through EU1070-001**

10 CSR 10-2.300

**Control of Emissions from the Manufacturing of Paints, Varnishes Lacquers, Enamels, and Other Allied Surface Coating Products**

**Operational Limitation:**

Covers shall be installed and maintained on all open-top tanks used for the production of non-waterbase coating products. These covers shall remain closed except when production, sampling, maintenance or inspection procedures require operator access.

**Reporting:**

The permittee shall report any deviations of this permit condition to the Air Pollution Control Program, Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than the annual compliance certification, as required by 10 CSR 10-6.065(5)(C)1.B.

**Permit Condition EU0680-002 through EU1070-002**

10 CSR 10-6.220

**Restriction of Emission of Visible Air Contaminants**

**Emission Limitation:**

- 1) The permittee shall not cause or permit to be discharged into the atmosphere from any source, visible emissions with an opacity greater than 20%.

- 2) The permittee may discharge into the atmosphere from any source of emissions, for a period(s) aggregating not more than six (6) minutes in any 60 minutes, air contaminants with an opacity up to 60%.

**Monitoring:**

- 1) The permittee shall conduct a visual emission observation on this emission point once a month using the procedures contained in U.S. EPA Test Method 22. At a minimum, the observer should be trained and knowledgeable about the effects on visibility of emissions caused by background contrast, ambient lighting, observer position relative to lighting, wind and the presence of uncombined water. Readings are only required when the emission unit is operating and when the weather conditions allow. If no visible or other significant emissions were observed using these procedures, then no further observations would be required that month. For emission units with visible emissions perceived or believed to exceed the applicable opacity standard, the source representative would then conduct a Method 9 observation.
- 2) Should a violation be observed, monitoring frequency will progress in the following manner:
  - a) Weekly observations shall be conducted for a minimum of eight (8) consecutive weeks after the date of the initial violation. Should no violation of this regulation be observed during this period, then,
  - b) Observations must be made once every two weeks for a period of eight (8) weeks. If a violation is noted, monitoring reverts to weekly. Should no violation of this regulation be observed during this period, then,
  - c) Observations must be made once per month.
- 3) The permittee shall have an annual Certified Method 9 Test performed on this emission point.

**Record Keeping:**

- 1) The permittee shall maintain records of all observation results (see Attachment C), noting:
  - a) Whether any air emissions (except for water vapor) were visible from the emission units,
  - b) All emission units from which visible emissions occurred, and
  - c) Whether the visible emissions were normal for the process.
- 2) The permittee shall maintain records of any equipment malfunctions. (see Attachment F)
- 3) The permittee shall maintain records of any Method 9 test performed in accordance with this permit condition. (see Attachment D)
- 4) Attachments C, D and F contain logs for these record keeping requirements. These logs, or an equivalent created by the permittee, must be used to certify compliance with this requirement.
- 5) All records shall be maintained onsite for a minimum of five (5) years and shall be made available to Department of Natural Resources personnel upon request.

**Reporting:**

The permittee shall report to the Air Pollution Control Program Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than ten days after the permittee determined using the Method 9 test that the emission unit(s) exceeded the opacity limit. Reports of any deviations from monitoring, record keeping and reporting requirements of this permit shall be submitted to the Air Pollution Control Program, Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than the annual compliance certification, as required by 10 CSR 10-6.065(6)(C)1.B.

**Big Batch Area**  
EIQ Reference (2005): EP17

**EU1080 – EU1310**

| Emission Unit | Equipment ID | Unit Description              | Volume (gal) |
|---------------|--------------|-------------------------------|--------------|
| EU1080        | 70G5601      | Gel Coat Dispersion Tank (60) | 3,300        |
| EU1090        | 70G5701      | Gel Coat Dispersion Tank (90) | 5,000        |
| EU1100        | 70G5801      | Gel Coat Dispersion Tank (60) | 3,300        |
| EU1110        | 70G5901      | Gel Coat Dispersion Tank (90) | 5,000        |
| EU1120        | 70G5101      | Gel Coat Dispersion Tank      | 550          |
| EU1130        | 70G5102      | Gel Coat Dispersion Tank      | 715          |
| EU1140        | 70G5103      | Gel Coat Dispersion Tank      | 550          |
| EU1150        | 70G5104      | Gel Coat Dispersion Tank      | 715          |
| EU1160        | 70G5201      | Gel Coat Dispersion Tank      | 1,100        |
| EU1170        | 70G5202      | Gel Coat Dispersion Tank      | 1,100        |
| EU1180        | 70G5203      | Gel Coat Dispersion Tank      | 1,100        |
| EU1190        | 70G5204      | Gel Coat Dispersion Tank      | 1,100        |
| EU1200        | 70G5301      | Gel Coat Dispersion Tank      | 440          |
| EU1210        | 70G5302      | Gel Coat Dispersion Tank      | 550          |
| EU1220        | 70G5303      | Gel Coat Dispersion Tank      | 550          |
| EU1230        | 70G5304      | Gel Coat Dispersion Tank      | 550          |
| EU1240        | 70G5401      | Gel Coat Dispersion Tank      | 550          |
| EU1250        | 70G5402      | Gel Coat Dispersion Tank      | 550          |
| EU1260        | 70G5403      | Gel Coat Dispersion Tank      | 550          |
| EU1270        | 70G5404      | Gel Coat Dispersion Tank      | 550          |
| EU1280        | 70G5501      | Gel Coat Dispersion Tank      | 550          |
| EU1290        | 70G5502      | Gel Coat Dispersion Tank      | 715          |
| EU1300        | 70G5503      | Gel Coat Dispersion Tank      | 550          |
| EU1310        | 70G5504      | Gel Coat Dispersion Tank      | 715          |

**Permit Condition EU1080-001 through EU1310-001**

10 CSR 10-2.300

**Control of Emissions from the Manufacturing of Paints, Varnishes Lacquers, Enamels, and Other Allied Surface Coating Products**

**Operational Limitation:**

Covers shall be installed and maintained on all open-top tanks used for the production of non-waterbase coating products. These covers shall remain closed except when production, sampling, maintenance or inspection procedures require operator access.

**Reporting:**

The permittee shall report any deviations/exceedances of this permit condition to the Air Pollution Control Program, Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than the annual compliance certification, as required by 10 CSR 10-6.065(5)(C)1.B.

**Permit Condition EU1080-002 through EU1310-002**

10 CSR 10-6.060

**Construction Permits Required (#052000-007A)**

**Operational Requirements:**

- 1) The baghouse shall be used to control emissions from the Big Batch Operation (EP17) during the powder addition phase of each batch, which is 25% or less of the batch operating time.
- 2) The filtration system shall be operated and maintained in accordance with the manufacturer's specifications.
- 3) The baghouse shall be equipped with a gauge or meter that indicates the pressure drop across the filters. Replacement filters shall be kept on hand at all times. The filters shall be made of fibers appropriate for operating conditions expected to occur (i.e. temperature limits, acidic and alkali resistance and abrasion resistance).

**Monitoring/Recordkeeping:**

- 1) The permittee shall monitor and record the operating pressure drop across the filtration system controlling the emissions from the Big Batch Operation (EP17) at least once in every twenty-four (24) hours of operation.
- 2) The operating pressure drop shall be maintained within the design conditions specified by the manufacturer's performance warranty (see Attachment E).
- 3) The permittee shall maintain an operating and maintenance log for the filtration system controlling emission from the Big Batch Operation (EP17). The log shall include the following:
  - a) The usage time of the baghouse relative to the operating time of the Big Batch Process;
  - b) Incidents of malfunction, with impact on emissions, duration of event, probable cause, and corrective actions (see Attachment F); and
  - c) Maintenance activities, including inspection schedule, repair actions, and replacements (see Attachment B).
- 4) All records shall be maintained onsite for a minimum of five (5) years and shall be made available to Department of Natural Resources personnel upon request.

**Reporting:**

The permittee shall report to the Air Pollution Control Program, Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than ten (10) days after any exceedance of any of the terms imposed by this regulation, or any malfunction which causes an exceedance of this regulation. Any deviations from this permit condition shall be reported in the annual compliance certification, as required by 10 CSR 10-6.065(5)(C)1.B.

**Permit Condition EU1080-003 through EU1310-003**

10 CSR 10-6.220

**Restriction of Emission of Visible Air Contaminants**

**Emission Limitation:**

- 1) The permittee shall not cause or permit to be discharged into the atmosphere from any source, visible emissions with an opacity greater than 20%.
- 2) The permittee may discharge into the atmosphere from any source of emissions, for a period(s) aggregating not more than six (6) minutes in any 60 minutes, air contaminants with an opacity up to 60%.

**Monitoring:**

- 1) The permittee shall conduct a visual emission observation on this emission point once a month using the procedures contained in U.S. EPA Test Method 22. At a minimum, the observer should be trained and knowledgeable about the effects on visibility of emissions caused by background contrast, ambient lighting, observer position relative to lighting, wind and the presence of uncombined water. Readings are only required when the emission unit is operating and when the weather conditions allow. If no visible or other significant emissions were observed using these procedures, then no further observations would be required that month. For emission units with visible emissions perceived or believed to exceed the applicable opacity standard, the source representative would then conduct a Method 9 observation.
- 2) Should a violation be observed, monitoring frequency will progress in the following manner:
  - a) Weekly observations shall be conducted for a minimum of eight (8) consecutive weeks after the date of the initial violation. Should no violation of this regulation be observed during this period, then,
  - b) Observations must be made once every two weeks for a period of eight (8) weeks. If a violation is noted, monitoring reverts to weekly. Should no violation of this regulation be observed during this period, then,
  - c) Observations must be made once per month.
- 3) The permittee shall have an annual Certified Method 9 Test performed on this emission point.

**Record Keeping:**

- 1) The permittee shall maintain records of all observation results (see Attachment C), noting:
  - a) Whether any air emissions (except for water vapor) were visible from the emission units,
  - b) All emission units from which visible emissions occurred, and
  - c) Whether the visible emissions were normal for the process.
- 2) The permittee shall maintain records of any equipment malfunctions. (see Attachment F)
- 3) The permittee shall maintain records of any Method 9 test performed in accordance with this permit condition. (see Attachment D)
- 4) Attachments C, D and F contain logs for these record keeping requirements. These logs, or an equivalent created by the permittee, must be used to certify compliance with this requirement.
- 5) All records shall be maintained onsite for a minimum of five (5) years and shall be made available to Department of Natural Resources personnel upon request.



**Reporting:**

The permittee shall report to the Air Pollution Control Program Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than ten days after the permittee determined using the Method 9 test that the emission unit(s) exceeded the opacity limit. Reports of any deviations from monitoring, record keeping and reporting requirements of this permit shall be submitted to the Air Pollution Control Program, Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than the annual compliance certification, as required by 10 CSR 10-6.065(6)(C)1.B.

**Permit Condition EU1080-004 through EU1110-004**

10 CSR 10-6.060

**Construction Permits Required (#052000-007A)**

**Operational Requirements:**

- 1) The Big Batch process (60s & 90s) emissions shall be routed to the Thermal Oxidizer for a period greater than or equal to 75% of the batch operating time.
- 2) The thermal oxidizer shall be operated and maintained in accordance with the manufacturer's specifications to ensure a minimum volatile organic compound (VOC) destruction efficiency of 98%.

**Monitoring/Recordkeeping:**

The permittee shall maintain an operating and maintenance log for the thermal oxidizer that shall include the following:

- 1) The usage time of the thermal oxidizer for the Big Batch process (60s & 90s) relative to the operating time of the 60s & 90s;
- 2) Incidents of malfunction; with impact on emissions, duration of event, probable cause and corrective actions (see Attachment F); and
- 3) Maintenance activities; with inspection schedule, repair actions and replacements, etc. (see Attachment B).

**Reporting:**

The permittee shall report to the Air Pollution Control Program, Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than ten (10) days after any exceedance of any of the terms imposed by this regulation, or any malfunction which causes an exceedance of this regulation. Any deviations from this permit condition shall be reported in the annual compliance certification, as required by 10 CSR 10-6.065(5)(C)1.B.

### Powder Coatings Production

#### EU1320 – EU1390

| Emission Unit | Equipment ID | EQ Reference (2005) | Unit Description                              | Capacity      |
|---------------|--------------|---------------------|-----------------------------------------------|---------------|
| EU1320        | 70K8000      | EP21                | Powder Coatings Reactor                       | 4,500 Gal     |
| EU1330        | 70K8100      | EP21                | Powder Coatings Reactor                       | 8,400 Gal     |
| EU1340        | 70SZ8142     | EP24                | Crusher #1                                    | 9,912 Lbs/hr  |
| EU1350        | 70S8180      | EP24                | Finished Product Silo                         | 10,000 Gal    |
| EU1360        | 70S8185      | EP24                | Finished Product Silo                         | 10,000 Gal    |
| EU1370        | 70PK8190     | EP24                | Packing Machine Bags                          | 700 Bags/hr   |
| EU1380        | 70PK8195     | EP24                | Super Sack Filling Machine                    | 45,000 Lbs/hr |
| EU1390        | 70H0001      | EP26                | Reaction Water Storage Tank (Hazardous Waste) | 19,000 Gal    |

#### Permit Condition EU1320-001 through EU1390-001

10 CSR 10-6.060

##### Construction Permits Required

Construction Permit #082001-020

##### Operational Requirements:

- 1) The permittee shall control emissions from the solid raw materials silos and funnels, and powder coating packaging system (EP24) using baghouses.
- 2) The baghouses shall be operated and maintained in accordance with the manufacturer's specifications. The baghouse shall be equipped with a gauge or meter, which indicates the pressure drop across the control device. These gauges or meters shall be located such that the Department of Natural Resources personnel may easily observe them.
- 3) Replacement filters for the baghouses shall be kept on hand at all times and shall be made of fibers appropriate for operating conditions expected to occur (i.e. temperature limits, acidic and alkali resistance, and abrasion resistance).
- 4) Thermal oxidizer must be in use at all times when the reactors (EP21) and reaction water storage tank (EP26) are in operation (this requirement excludes periods of startup, shutdown and malfunction).
- 5) Thermal oxidizer shall be operated and maintained in accordance with the manufacturer's specifications to ensure a minimum volatile organic compound (VOC) destruction efficiency of 98%.

**Monitoring/Recordkeeping:**

- 1) The permittee shall monitor and record the operating pressure drop across the baghouses at least once every 24 hours.
- 2) The operating pressure drop shall be maintained within the design conditions specified by the manufacturer's performance warranty (see Attachment E).
- 3) The permittee shall maintain an operating and maintenance log for the baghouses which shall include the following:
  - a) Incidents of malfunction, with impact on emissions, duration of even probable cause, and corrective actions (see Attachment F); and
  - b) Maintenance activities, including the inspection schedule, repair actions, and replacements (see Attachment B).
- 4) The permittee shall maintain an operating and maintenance log for the thermal oxidizer that shall include the following:
  - a) Incidents of malfunction; with impact on emissions, duration of event, probable cause and corrective actions (see Attachment F).
  - b) Maintenance activities, including the inspection schedule, repair actions, and replacements (see Attachment B).
- 5) All records shall be maintained onsite for a minimum of five (5) years and shall be made available to Department of Natural Resources personnel upon request.

**Reporting:**

The permittee shall report to the Air Pollution Control Program, Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than ten (10) days after any exceedance of any of the terms imposed by this regulation, or any malfunction which causes an exceedance of this regulation. Any deviations from this permit condition shall be reported no later than the annual compliance certification, as required by 10 CSR 10-6.065(5)(C)1.B.

**Permit Condition EU1320-002 through EU1380-002**

10 CSR 10-6.220

**Restriction of Emission of Visible Air Contaminants**

**Emission Limitation:**

- 1) The permittee shall not cause or permit to be discharged into the atmosphere from any source, visible emissions with an opacity greater than 20%.
- 2) The permittee may discharge into the atmosphere from any source of emissions, for a period(s) aggregating not more than six (6) minutes in any 60 minutes, air contaminants with an opacity up to 60%.

**Monitoring:**

- 1) The permittee shall conduct a visual emission observation on this emission point once a month using the procedures contained in U.S. EPA Test Method 22. At a minimum, the observer should be trained and knowledgeable about the effects on visibility of emissions caused by background contrast, ambient lighting, observer position relative to lighting, wind and the presence of uncombined water. Readings are only required when the emission unit is operating and when the weather conditions allow. If no visible or other significant emissions were observed using these procedures, then no further observations would be required that month. For emission units with

visible emissions perceived or believed to exceed the applicable opacity standard, the source representative would then conduct a Method 9 observation.

- 2) Should a violation be observed, monitoring frequency will progress in the following manner:
  - a) Weekly observations shall be conducted for a minimum of eight (8) consecutive weeks after the date of the initial violation. Should no violation of this regulation be observed during this period, then,
  - b) Observations must be made once every two weeks for a period of eight (8) weeks. If a violation is noted, monitoring reverts to weekly. Should no violation of this regulation be observed during this period, then,
  - c) Observations must be made once per month.
- 3) The permittee shall have an annual Certified Method 9 Test performed on this emission point.

**Record Keeping:**

- 1) The permittee shall maintain records of all observation results (see Attachment C), noting:
  - a) Whether any air emissions (except for water vapor) were visible from the emission units,
  - b) All emission units from which visible emissions occurred, and
  - c) Whether the visible emissions were normal for the process.
- 2) The permittee shall maintain records of any equipment malfunctions. (see Attachment F)
- 3) The permittee shall maintain records of any Method 9 test performed in accordance with this permit condition. (see Attachment D)
- 4) Attachments C, D and F contain logs for these record keeping requirements. These logs, or an equivalent created by the permittee, must be used to certify compliance with this requirement.
- 5) All records shall be maintained onsite for a minimum of five (5) years and shall be made available to Department of Natural Resources personnel upon request.

**Reporting:**

The permittee shall report to the Air Pollution Control Program Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than ten days after the permittee determined using the Method 9 test that the emission unit(s) exceeded the opacity limit. Reports of any deviations from monitoring, record keeping and reporting requirements of this permit shall be submitted to the Air Pollution Control Program, Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than the annual compliance certification, as required by 10 CSR 10-6.065(6)(C)1.B.

**Permit Condition EU1320-003 through EU1330-003**

10 CSR 10-2.300

**Control of Emissions from the Manufacturing of Paints, Varnishes Lacquers, Enamels, and Other Allied Surface Coating Products**

**Operational Requirements:**

- 1) Covers shall be installed and maintained on all open-top tanks or vessels used for the production of non-waterbase coating products. These covers shall remain closed except when production, sampling, maintenance or inspection procedures require operator access.
- 2) The polymerization of synthetic resin shall be done in a completely enclosed operation with the VOC emissions controlled by the use of the thermal oxidizer.
- 3) The permittee shall operate the thermal oxidizer at all times during the operation of the powder coatings process (this requirement excludes periods of startup, shutdown and malfunction).

- 4) The permittee shall maintain a minimum overall destruction efficiency of VOCs of 98% for the thermal oxidizer.

**Monitoring:**

- 1) The permittee shall conduct performance testing on the thermal oxidizer once every five years or once per Title V permit term.
- 2) The permittee shall continuously monitor and maintain a minimum chamber temperature of 1400°F on the thermal oxidizer.
- 3) Accuracy of the thermocouple in the thermal oxidizer chamber will be verified by a second, or redundant thermocouple probe inserted into the chamber with a hand held meter. This validation check will be conducted a minimum of once per calendar year. The difference between the reading of the two thermocouples shall not exceed  $\pm 30^{\circ}\text{F}$ .
- 4) The permittee shall initiate procedures for corrective action within twenty-four (24) hours of detection of an operating malfunction of the thermal oxidizer.

**Performance Testing:**

- 1) The VOC control efficiency shall be determined by the testing methods referenced in 10 CSR 10-6.030(14)(A) – 40 CFR Part 60, Appendix A – Test Methods, Method 25 – Determination of Total Gaseous Non-methane Organic Emissions as Carbon. The same method shall be used to sample emissions from alternate control measures subject to the director's review in subsection (4)(A).
- 2) The date on which performance tests are conducted must be prearranged with the Air Pollution Control Program a minimum of 30 days prior to the proposed test date so that the Program may arrange a pretest meeting, if necessary, and assure that the test date is acceptable for an observer to be present. A completed Proposed Test Plan form may serve the purpose of notification and must be approved by the Air Pollution Control Program prior to conducting the required emission testing.
- 3) The permittee shall conduct performance testing during periods of representative conditions at the maximum process/production rate, or within 10% of this rate, not to include periods of startup, shutdown, or malfunction.
- 4) The permittee shall provide or cause to be provided, performance testing facilities as follows:
  - a) Safe sampling platform(s).
  - b) Safe access to sampling platform(s).
  - c) Utilities for sampling and testing equipment.
  - d) Sampling ports adequate for test methods applicable to this facility. This includes:
    - i) Constructing the air pollution control system such that volumetric flow rates and pollutant emission rates can be accurately determined by applicable test methods and procedures;
    - ii) Providing a stack or duct with cyclonic flow averaging less than 20° over all test points during the performance tests as stated in 40 CFR Part 60, Appendix A, Method 1 – Sample and Velocity Traverse for Stationary Sources; and
    - iii) Removal of the port caps 24 hours prior to testing to verify both their removability as well as full-diameter clearance to the stack; caps may be retained hand tight.
- 5) Operating Parameter Limits:
  - a) During the performance test for the thermal oxidizer, the permittee shall establish site-specific operating parameter values for the minimum and maximum chamber temperature.
  - b) During the emission test, each operating parameter must be monitored continuously and recorded with sufficient frequency to establish a representative average value for that parameter, but no less frequently than once every fifteen (15) minutes.
  - c) The permittee shall determine the operating parameter monitoring values as the averages of the values recorded during any of the runs for which results are used to establish the control efficiency.

- d) The permittee may conduct multiple performance tests to establish alternative compliant operating parameter values.
- e) The permittee may re-establish compliant operating parameter values as part of any performance test that is conducted subsequent to the initial test.

**Recordkeeping:**

- 1) The permittee shall keep records of powder coatings production rates sufficient to determine daily VOC emissions. The permittee shall use the production rate records to calculate daily VOC emissions for Department of Natural Resources personnel upon request.
- 2) The permittee shall keep a log of all routine and unscheduled maintenance and repair activities on the thermal oxidizer (see Attachment B).
- 3) The permittee shall keep records of the continuously monitored chamber temperature of the thermal oxidizer.
- 4) The permittee shall record the results of all annual thermocouple testing.
- 5) The permittee shall keep record of the results of the most recent performance test conducted on the thermal oxidizer.
- 6) All records shall be maintained onsite for a minimum of five (5) years and shall be made available to Department of Natural Resources personnel upon request.

**Reporting:**

The permittee shall report to the Air Pollution Control Program, Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than ten (10) days after any exceedance of any of the terms imposed by this regulation, or any malfunction which causes an exceedance of this regulation. Any deviations from this permit condition shall be reported no later than the annual compliance certification, as required by 10 CSR 10-6.065(5)(C)1.B.

| EU1400                                                                                                        |                     |                  |             |
|---------------------------------------------------------------------------------------------------------------|---------------------|------------------|-------------|
| Emission Unit                                                                                                 | EQ Reference (2005) | Unit Description | Capacity    |
| EU1400                                                                                                        | EP22                | Hot Oil Heater   | 12 MMBtu/hr |
| <b>Permit Condition EU1400-001</b>                                                                            |                     |                  |             |
| 10 CSR 10-6.040                                                                                               |                     |                  |             |
| <b>Maximum Allowable Emission of Particulate Matter from Fuel Burning Equipment Used for Indirect Heating</b> |                     |                  |             |

**Emission Limitation:**

The permittee shall not emit particulate matter from these emission units in excess of 0.23 pounds per million BTU of heat input.

**Operational Limitation/Equipment Specifications:**

This emission unit shall be limited to burning pipeline grade natural gas.

**Monitoring/Record Keeping:**

- 1) The permittee shall maintain calculations at the installation demonstrating compliance with this rule (see Attachment A).

- 2) The calculations shall be kept onsite and be made available to Department of Natural Resources' personnel upon request.

**Reporting:**

The permittee shall report any deviations/exceedances of this permit condition to the Air Pollution Control Program, Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than the annual compliance certification, as required by 10 CSR 10-6.065(5)(C)1.B.

**Gel Coat and Resin Loading/Packaging**

**EU1410 – EU1430**

| <b>Emission Unit</b> | <b>EIQ Reference (2005)</b> | <b>Unit Description</b>    | <b>Configuration</b> |
|----------------------|-----------------------------|----------------------------|----------------------|
| EU1410               | EP16                        | Small Batch Area Packaging | Gravity Feed         |
| EU1420               | EP16                        | Big Batch Area Packaging   | Drumming Machine     |
| EU1430               | EP19                        | Tanker Truck Loading       | Flexible Hose        |

**Permit Condition EU1410-001 through EU1430-001**

10 CSR 10-2.300

**Control of Emissions from the Manufacturing of Paints, Varnishes Lacquers, Enamels, and Other Allied Surface Coating Products**

**Operational Limitation:**

Covers shall be installed and maintained on all open-top tanks used for the production on non-waterbase coating products. These covers shall remain closed except when production, sampling, maintenance or inspection procedures required operator access.

**Reporting:**

The permittee shall report any deviations of this permit condition to the Air Pollution Control Program, Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than the annual compliance certification, as required by 10 CSR 10-6.065(5)(C)1.B.

### Process Solvent Cleaning

#### EU1440

| Emission Unit | Location         | Unit Description |
|---------------|------------------|------------------|
| EU1440        | Small Batch Area | Port Washer      |

#### Permit Condition EU1440-001

10 CSR 10-2.300

**Control of Emissions from the Manufacturing of Paints, Varnishes Lacquers, Enamels, and Other Allied Surface Coating Products**

**Operational Limitation:**

Covers shall be installed and maintained on all containers and tanks containing VOC used for cleaning equipment. These covers shall remain closed except when operator access is required.

**Reporting:**

The permittee shall report any deviations of this permit condition to the Air Pollution Control Program, Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than the annual compliance certification, as required by 10 CSR 10-6.065(5)(C)1.B.

#### Pilot Lab Production Area

EIQ Reference (2005): EP30

#### EU1450 – EU1490

| Emission Unit | Equipment ID | Unit Description | Volume (gal) |
|---------------|--------------|------------------|--------------|
| EU1450        | T1401        | Resin Reactor    | 60           |
| EU1460        | T2401        | Resin Reactor    | 10           |
| EU1470        | T1601        | Resin Thin Tank  | 120          |
| EU1480        | T1701        | Resin Thin Tank  | 120          |
| EU1490        | T2601        | Resin Thin Tank  | 20           |



**Permit Condition EU1450-001 through EU1490-001**

10 CSR 10-2.300

**Control of Emissions from the Manufacturing of Paints, Varnishes Lacquers, Enamels, and Other Allied Surface Coating Products**

**Operational Requirements:**

- 1) Covers shall be installed and maintained on all open-top tanks or vessels used for the production of non-waterbase coating products. These covers shall remain closed except when production, sampling, maintenance or inspection procedures require operator access.
- 2) The polymerization of synthetic resin shall be done in a completely enclosed operation with the VOC emissions controlled by the use of the thermal oxidizer.
- 3) The permittee shall operate the thermal oxidizer at all times during the operation of the resin reactors or resin thin tanks (this requirement excludes periods of startup, shutdown and malfunction).
- 4) The permittee shall maintain a minimum overall destruction efficiency of VOCs of 95% for the thermal oxidizer.

**Monitoring:**

- 1) The permittee shall continuously monitor and maintain a minimum chamber temperature of 1400°F.
- 2) Accuracy of the thermocouple in the thermal oxidizer chamber will be verified by a second, or redundant thermocouple probe inserted into the chamber with a hand held meter. This validation check will be conducted a minimum of once per calendar year. The difference between the reading of the two thermocouples shall not exceed  $\pm 30^{\circ}\text{F}$ .
- 3) The permittee shall initiate procedures for corrective action within twenty-four (24) hours of detection of an operating malfunction of the thermal oxidizer.

**Recordkeeping:**

- 1) The permittee shall keep records of resin production rates sufficient to determine daily VOC emissions. The permittee shall use the resin production rate records to calculate daily VOC emissions for Department of Natural Resources personnel upon request.
- 2) The permittee shall keep a log of all routine and unscheduled maintenance and repair activities on the thermal oxidizer.
- 3) The permittee shall keep records of the continuously monitored chamber temperature of the thermal oxidizer.
- 4) All records shall be maintained onsite for a minimum of five (5) years and shall be made available to Department of Natural Resources personnel upon request.

**Reporting:**

The permittee shall report to the Air Pollution Control Program, Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than ten (10) days after any exceedance of any of the terms imposed by this regulation, or any malfunction which causes an exceedance of this regulation. Any deviations from this permit condition shall be reported no later than the annual compliance certification, as required by 10 CSR 10-6.065(5)(C)1.B.

**EU1500 – EU1550**

| Emission Unit | Equipment ID | Unit Description   | Volume (gal) |
|---------------|--------------|--------------------|--------------|
| EU1500        | T1101        | Monomer Feed Tank  | 48           |
| EU1510        | T1301        | Monomer Feed Tank  | 48           |
| EU1520        | T2101        | Monomer Feed Tank  | 8            |
| EU1530        | T2301        | Monomer Feed Tank  | 8            |
| EU1540        | T1201        | Catalyst Feed Tank | 6            |
| EU1550        | T2201        | Catalyst Feed Tank | 1            |

**Permit Condition EU1500-001 through EU1550-001**

10 CSR 10-2.300

**Control of Emissions from the Manufacturing of Paints, Varnishes Lacquers, Enamels, and Other Allied Surface Coating Products**

**Operational Requirement:**

Covers shall be installed and maintained on all open-top tanks or vessels used for the production of non-waterbase coating products. These covers shall remain closed except when production, sampling, maintenance or inspection procedures require operator access.

**Reporting:**

The permittee shall report any deviations of this permit condition to the Air Pollution Control Program, Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than the annual compliance certification, as required by 10 CSR 10-6.065(5)(C)1.B.

**EU1560**

| Emission Unit | Manufacturer | Unit Description             | Capacity |
|---------------|--------------|------------------------------|----------|
| EU1560        | Caterpillar  | Emergency Generator (Diesel) | 587 Hp   |

**Permit Condition EU1560-001**

10 CSR 10-6.260

**Restriction of Emission of Sulfur Compounds**

**Emission Limitation:**

- 1) Emissions from any existing or new source operation shall not contain more than five hundred parts per million by volume (500 ppmv) of sulfur dioxide.
- 2) Stack gasses shall not contain more than thirty-five milligrams (35 mg) per cubic meter of sulfuric acid or sulfur trioxide or any combination of those gases averaged on any consecutive three-hour time period.
- 3) No person shall cause or permit the emission of sulfur compounds from any source which causes or contributes to concentrations exceeding those specified in 10 CSR 10-6.010 Ambient Air Quality

Standards. [10 CSR 10-6.260(4) of August 30, 1996 version, 10 CSR 10-6.260(3)(B) of May 30, 2004 version & 10 CSR 10-6.010 Ambient Air Quality Standards]

| Pollutant                                          | Concentration by Volume                                                                         | Remarks                                                                            |
|----------------------------------------------------|-------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
| Sulfur Dioxide (SO <sub>2</sub> )                  | 0.03 parts per million (ppm)<br>(80 micrograms per cubic meter<br>( $\mu\text{g}/\text{m}^3$ )) | Annual arithmetic mean                                                             |
|                                                    | 0.14 ppm (365 $\mu\text{g}/\text{m}^3$ )                                                        | 24-hour average not to be<br>exceeded more than once per<br>year                   |
|                                                    | 0.5 ppm (1300 $\mu\text{g}/\text{m}^3$ )                                                        | 3-hour average not to be<br>exceeded more than once per<br>year                    |
| Hydrogen Sulfide<br>(H <sub>2</sub> S)             | 0.05 ppm (70 $\mu\text{g}/\text{m}^3$ )                                                         | 1/2-hour average not to be<br>exceeded over 2 times per year                       |
|                                                    | 0.03 ppm (42 $\mu\text{g}/\text{m}^3$ )                                                         | 1/2-hour average not to be<br>exceeded over 2 times in any 5<br>consecutive days   |
| Sulfuric Acid<br>(H <sub>2</sub> SO <sub>4</sub> ) | 10 $\mu\text{g}/\text{m}^3$                                                                     | 24-hour average not to be<br>exceeded more than once in<br>any 90 consecutive days |

**Monitoring/Recordkeeping:**

- 1) The permittee shall keep calculations demonstrating compliance with this rule (see Attachment H).
- 2) These calculations shall be maintained onsite for the life of the source and shall be made available to Department of Natural Resources personnel upon request.

**Reporting:**

The permittee shall report any deviations of this permit condition to the Air Pollution Control Program, Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than the annual compliance certification, as required by 10 CSR 10-6.065(5)(C)1.B.

## IV. Core Permit Requirements

The installation shall comply with each of the following requirements. Consult the appropriate sections in the Code of Federal Regulations (CFR), Code of State Regulations (CSR), and local ordinances for the full text of the applicable requirements. All citations, unless otherwise noted, are to the regulations in effect as of the date that this permit is issued.

### 10 CSR 10-6.050 Start-up, Shutdown and Malfunction Conditions

- 1) In the event of a malfunction, which results in excess emissions that exceed one hour, the permittee shall submit to the director within two business days, in writing, the following information:
  - a) Name and location of installation;
  - b) Name and telephone number of person responsible for the installation;
  - c) Name of the person who first discovered the malfunction and precise time and date that the malfunction was discovered.
  - d) Identity of the equipment causing the excess emissions;
  - e) Time and duration of the period of excess emissions;
  - f) Cause of the excess emissions;
  - g) Air pollutants involved;
  - h) Best estimate of the magnitude of the excess emissions expressed in the units of the applicable requirement and the operating data and calculations used in estimating the magnitude;
  - i) Measures taken to mitigate the extent and duration of the excess emissions; and
  - j) Measures taken to remedy the situation that caused the excess emissions and the measures taken or planned to prevent the recurrence of these situations.
- 2) The permittee shall submit the paragraph 1 information list to the director in writing at least ten days prior to any maintenance, start-up or shutdown, which is expected to cause an excessive release of emissions that exceed one hour. If notice of the event cannot be given ten days prior to the planned occurrence, it shall be given as soon as practicable prior to the release. If an unplanned excess release of emissions exceeding one hour occurs during maintenance, start-up or shutdown, the director shall be notified verbally as soon as practical during normal working hours and no later than the close of business of the following working day. A written notice shall follow within ten working days.
- 3) Upon receipt of a notice of excess emissions issued by an agency holding a certificate of authority under section 643.140, RSMo, the permittee may provide information showing that the excess emissions were the consequence of a malfunction, start-up or shutdown. The information, at a minimum, should be the paragraph 1 list and shall be submitted not later than 15 days after receipt of the notice of excess emissions. Based upon information submitted by the permittee or any other pertinent information available, the director or the commission shall make a determination whether the excess emissions constitute a malfunction, start-up or shutdown and whether the nature, extent and duration of the excess emissions warrant enforcement action under section 643.080 or 643.151, RSMo.
- 4) Nothing in this rule shall be construed to limit the authority of the director or commission to take appropriate action, under sections 643.080, 643.090 and 643.151, RSMo to enforce the provisions of the Air Conservation Law and the corresponding rule.
- 5) Compliance with this rule does not automatically absolve the permittee of liability for the excess emissions reported.

### **10 CSR 10-6.060 Construction Permits Required**

The permittee shall not commence construction, modification, or major modification of any installation subject to this rule, begin operation after that construction, modification, or major modification, or begin operation of any installation which has been shut down longer than five years without first obtaining a permit from the permitting authority.

### **10 CSR 10-6.065 Operating Permits**

The permittee shall file a complete application for renewal of this operating permit at least six months before the date of permit expiration. In no event shall this time be greater than eighteen months. [10 CSR 10-6.065(5)(B)1.A(III)] The permittee shall retain the most current operating permit issued to this installation on-site. [10 CSR 10-6.065, §(5)(C)(1) and §(6)(C)1.C(II)] The permittee shall immediately make such permit available to any Missouri Department of Natural Resources personnel upon request. [10 CSR 10-6.065, §(5)(C)(1) and §(6)(C)3.B]

### **10 CSR 10-6.110 Submission of Emission Data, Emission Fees and Process Information**

- 1) The permittee shall complete and submit an Emission Inventory Questionnaire (EIQ) in accordance with the requirements outlined in this rule.
- 2) The permittee shall pay an annual emission fee per ton of regulated air pollutant emitted according to the schedule in the rule. This fee is an emission fee assessed under authority of RSMo. 643.079.
- 3) The fees shall be payable to the Department of Natural Resources and shall be accompanied by the Emissions Inventory Questionnaire (EIQ) form or equivalent approved by the director.

### **10 CSR 10-6.130 Controlling Emissions During Episodes of High Air Pollution Potential**

This rule specifies the conditions that establish an air pollution alert (yellow/orange/red/purple), or emergency (maroon) and the associated procedures and emission reduction objectives for dealing with each. The permittee shall submit an appropriate emergency plan if required by the Director.

### **10 CSR 10-6.150 Circumvention**

The permittee shall not cause or permit the installation or use of any device or any other means which, without resulting in reduction in the total amount of air contaminant emitted, conceals or dilutes an emission or air contaminant which violates a rule of the Missouri Air Conservation Commission.

### **10 CSR 10-6.170 Restriction of Particulate Matter to the Ambient Air Beyond the Premises of Origin**

- 1) The permittee shall not cause or allow to occur any handling, transporting or storing of any material; construction, repair, cleaning or demolition of a building or its appurtenances; construction or use of a road, driveway or open area; or operation of a commercial or industrial installation without applying reasonable measures as may be required to prevent, or in a manner which allows or may allow, fugitive particulate matter emissions to go beyond the premises of origin in quantities that the particulate matter may be found on surfaces beyond the property line of origin. The nature or origin of the particulate matter shall be determined to a reasonable degree of certainty by a technique proven to be accurate and approved by the director.
- 2) The permittee shall not cause nor allow to occur any fugitive particulate matter emissions to remain visible in the ambient air beyond the property line of origin.

- 3) Should it be determined that noncompliance has occurred, the director may require reasonable control measures as may be necessary. These measures may include, but are not limited to, the following:
  - a) Revision of procedures involving construction, repair, cleaning and demolition of buildings and their appurtenances that produce particulate matter emissions;
  - b) Paving or frequent cleaning of roads, driveways and parking lots;
  - c) Application of dust-free surfaces;
  - d) Application of water; and
  - e) Planting and maintenance of vegetative ground cover.

#### **10 CSR 10-6.180 Measurement of Emissions of Air Contaminants**

- 1) The director may require any person responsible for the source of emission of air contaminants to make or have made tests to determine the quantity or nature, or both, of emission of air contaminants from the source. The director may specify testing methods to be used in accordance with good professional practice. The director may observe the testing. Qualified personnel shall perform all tests.
- 2) The director may conduct tests of emissions of air contaminants from any source. Upon request of the director, the person responsible for the source to be tested shall provide necessary ports in stacks or ducts and other safe and proper sampling and testing facilities, exclusive of instruments and sensing devices as may be necessary for proper determination of the emission of air contaminants.
- 3) The director shall be given a copy of the test results in writing and signed by the person responsible for the tests.

#### **10 CSR 10-2.100 Open Burning Restrictions**

- 1) The permittee shall not conduct, cause, permit or allow a salvage operation, the disposal of trade wastes or burning of refuse by open burning.
- 2) Exception - Open burning of trade waste or vegetation may be permitted only when it can be shown that open burning is the only feasible method of disposal or an emergency exists which requires open burning.
- 3) Any person intending to engage in open burning shall file a request to do so with the director. The request shall include the following:
  - a) The name, address and telephone number of the person submitting the application; The type of business or activity involved; A description of the proposed equipment and operating practices, the type, quantity and composition of trade wastes and expected composition and amount of air contaminants to be released to the atmosphere where known;
  - b) The schedule of burning operations;
  - c) The exact location where open burning will be used to dispose of the trade wastes;
  - d) Reasons why no method other than open burning is feasible; and
  - e) Evidence that the proposed open burning has been approved by the fire control authority which has jurisdiction.
- 4) Upon approval of the open burning permit application by the director, the person may proceed with the operation under the terms of the open burning permit. Be aware that such approval shall not exempt Cook Composites and Polymers Co. from the provisions of any other law, ordinance or regulation.
- 4) The permittee shall maintain files with letters from the director approving the open burning operation and previous DNR inspection reports.

### **10 CSR 10-2.070 Restriction of Emission of Odors**

No person may cause, permit or allow the emission of odorous matter in concentrations and frequencies or for durations that odor can be perceived when one volume of odorous air is diluted with seven volumes of odor-free air for two separate trials not less than 15 minutes apart within the period of one hour.  
**This requirement is not federally enforceable.**

### **10 CSR 10-6.080 Emission Standards for Hazardous Air Pollutants and 40 CFR Part 61 Subpart M National Emission Standard for Asbestos**

- 1) The permittee shall follow the procedures and requirements of 40 CFR Part 61, Subpart M for any activities occurring at this installation which would be subject to provisions for 40 CFR Part 61, Subpart M, National Emission Standard for Asbestos.
- 2) The permittee shall conduct monitoring to demonstrate compliance with registration, certification, notification, and Abatement Procedures and Practices standards as specified in 40 CFR Part 61, Subpart M.

### **10 CSR 10-6.250 Asbestos Abatement Projects – Certification, Accreditation, and Business Exemption Requirements**

The permittee shall conduct all asbestos abatement projects within the procedures established for certification and accreditation by 10 CSR 10-6.250. This rule requires individuals who work in asbestos abatement projects to be certified by the Missouri Department of Natural Resources Air Pollution Control Program. This rule requires training providers who offer training for asbestos abatement occupations to be accredited by the Missouri Department of Natural Resources Air Pollution Control Program. This rule requires persons who hold exemption status from certain requirements of this rule to allow the department to monitor training provided to employees. Each individual who works in asbestos abatement projects must first obtain certification for the appropriate occupation from the department. Each person who offers training for asbestos abatement occupations must first obtain accreditation from the department. Certain business entities that meet the requirements for state-approved exemption status must allow the department to monitor training classes provided to employees who perform asbestos abatement.

### **Title VI – 40 CFR Part 82 Protection of Stratospheric Ozone**

- 1) The permittee shall comply with the standards for labeling of products using ozone-depleting substances pursuant to 40 CFR Part 82, Subpart E:
  - a) All containers in which a class I or class II substance is stored or transported, all products containing a class I substance, and all products directly manufactured with a class I substance must bear the required warning statement if it is being introduced into interstate commerce pursuant to §82.106.
  - b) The placement of the required warning statement must comply with the requirements pursuant to §82.108.
  - c) The form of the label bearing the required warning statement must comply with the requirements pursuant to §82.110.
  - d) No person may modify, remove, or interfere with the required warning statement except as described in §82.112.
- 2) The permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 CFR Part 82, Subpart F, except as provided for motor vehicle air conditioners (MVACs) in Subpart B:

- a) Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to §82.156.
  - b) Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to §82.158.
  - c) Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to §82.161.
  - d) Persons disposing of small appliances, MVACs, and MVAC-like appliances must comply with record keeping requirements pursuant to §82.166. ("MVAC-like" appliance as defined at §82.152).
  - e) Persons owning commercial or industrial process refrigeration equipment must comply with the leak repair requirements pursuant to §82.156.
  - f) Owners/operators of appliances normally containing 50 or more pounds of refrigerant must keep records of refrigerant purchased and added to such appliances pursuant to §82.166.
- 3) If the permittee manufactures, transforms, imports, or exports a class I or class II substance, the permittee is subject to all the requirements as specified in 40 CFR part 82, Subpart A, Production and Consumption Controls.
- 4) If the permittee performs a service on motor (fleet) vehicles when this service involves ozone-depleting substance refrigerant (or regulated substitute substance) in the motor vehicle air conditioner (MVAC), the permittee is subject to all the applicable requirements as specified in 40 CFR part 82, Subpart B, Servicing of Motor Vehicle Air conditioners. The term "motor vehicle" as used in Subpart B does not include a vehicle in which final assembly of the vehicle has not been completed. The term "MVAC" as used in Subpart B does not include the air-tight sealed refrigeration system used as refrigerated cargo, or system used on passenger buses using HCFC-22 refrigerant.

The permittee shall be allowed to switch from any ozone-depleting substance to any alternative that is listed in the Significant New Alternatives Program (SNAP) promulgated pursuant to 40 CFR part 82, Subpart G, Significant New Alternatives Policy Program. *Federal Only - 40 CFR part 82*

#### **10 CSR 10-6.280 Compliance Monitoring Usage**

- 1) The permittee is not prohibited from using the following in addition to any specified compliance methods for the purpose of submission of compliance certificates:
  - a) Monitoring methods outlined in 40 CFR Part 64;
  - b) Monitoring method(s) approved for the permittee pursuant to 10 CSR 10-6.065, "Operating Permits", and incorporated into an operating permit; and
  - c) Any other monitoring methods approved by the director.
- 2) Any credible evidence may be used for the purpose of establishing whether a permittee has violated or is in violation of any such plan or other applicable requirement. Information from the use of the following methods is presumptively credible evidence of whether a violation has occurred by a permittee:
  - a) Monitoring methods outlined in 40 CFR Part 64;
  - b) A monitoring method approved for the permittee pursuant to 10 CSR 10-6.065, "Operating Permits", and incorporated into an operating permit; and
  - c) Compliance test methods specified in the rule cited as the authority for the emission limitations.
- 3) The following testing, monitoring or information gathering methods are presumptively credible testing, monitoring, or information gathering methods:
  - a) Applicable monitoring or testing methods, cited in:
    - i) 10 CSR 10-6.030, "Sampling Methods for Air Pollution Sources";



- ii) 10 CSR 10-6.040, "Reference Methods";
- iii) 10 CSR 10-6.070, "New Source Performance Standards";
- iv) 10 CSR 10-6.080, "Emission Standards for Hazardous Air Pollutants"; or
- b) Other testing, monitoring, or information gathering methods, if approved by the director, that produce information comparable to that produced by any method listed above.

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## V. General Permit Requirements

The installation shall comply with each of the following requirements. Consult the appropriate sections in the Code of Federal Regulations (CFR) and Code of State Regulations (CSR) for the full text of the applicable requirements. All citations, unless otherwise noted, are to the regulations in effect as of the date that this permit is issued.

### **10 CSR 10-6.065, §(5)(C)1 and §(6)(C)1.B Permit Duration**

This permit is issued for a term of five years, commencing on the date of issuance. This permit will expire at the end of this period unless renewed.

### **10 CSR 10-6.065, §(5)(C)1 and §(6)(C)1.C General Record Keeping and Reporting Requirements**

- 1) Record Keeping
  - a) All required monitoring data and support information shall be retained for a period of at least five years from the date of the monitoring sample, measurement, report or application.
  - b) Copies of all current operating and construction permits issued to this installation shall be kept on-site for as long as the permits are in effect. Copies of these permits shall be made immediately available to any Missouri Department of Natural Resources personnel upon request.
- 2) Reporting
  - a) All reports shall be submitted to the Air Pollution Control Program, Enforcement Section, P. O. Box 176, Jefferson City, MO 65102.
  - b) The permittee shall submit a report of all required monitoring by:
    - i) April 1st for monitoring which covers the January through December time period.
    - ii) Exception. Monitoring requirements which require reporting more frequently than annually shall report no later than 30 days after the end of the calendar quarter in which the measurements were taken.
  - c) Each report shall identify any deviations from emission limitations, monitoring, record keeping, reporting, or any other requirements of the permit.
  - d) Submit supplemental reports as required or as needed. Supplemental reports are required no later than ten days after any exceedance of any applicable rule, regulation or other restriction. All reports of deviations shall identify the cause or probable cause of the deviations and any corrective actions or preventative measures taken.
    - i) Notice of any deviation resulting from an emergency (or upset) condition as defined in paragraph (6)(C)7 of 10 CSR 10-6.065 (Emergency Provisions) shall be submitted to the permitting authority either verbally or in writing within two working days after the date on which the emission limitation is exceeded due to the emergency, if the permittee wishes to assert an affirmative defense. The affirmative defense of emergency shall be demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that indicate an emergency occurred and the permittee can identify the cause(s) of the emergency. The permitted installation must show that it was operated properly at the time and that during the period of the emergency the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or requirements in the permit. The notice must contain a description of the emergency, the steps taken to mitigate emissions, and the corrective actions taken.
    - ii) Any deviation that poses an imminent and substantial danger to public health, safety or the environment shall be reported as soon as practicable.

- iii) Any other deviations identified in the permit as requiring more frequent reporting than the permittee's annual report shall be reported on the schedule specified in this permit, and no later than ten days after any exceedance of any applicable rule, regulation, or other restriction.
- e) Every report submitted shall be certified by the responsible official, except that, if a report of a deviation must be submitted within ten days after the deviation, the report may be submitted without a certification if the report is resubmitted with an appropriate certification within ten days after that, together with any corrected or supplemental information required concerning the deviation.
- f) The permittee may request confidential treatment of information submitted in any report of deviation.

#### **10 CSR 10-6.065 §(5)(C)1 and §(6)(C)1.D Risk Management Plan Under Section 112(r)**

The permittee shall comply with the requirements of 40 CFR Part 68, Accidental Release Prevention Requirements. If the permittee has more than a threshold quantity of a regulated substance in process, as determined by 40 CFR Section 68.115, the permittee shall submit a Risk Management Plan in accordance with 40 CFR Part 68 no later than the latest of the following dates:

- 1) June 21, 1999;
- 2) Three years after the date on which a regulated substance is first listed under 40 CFR Section 68.130; or
- 3) The date on which a regulated substance is first present above a threshold quantity in a process.

#### **10 CSR 10-6.065(5)(C)1.A General Requirements**

- 1) The permittee must comply with all of the terms and conditions of this permit. Any noncompliance with a permit condition constitutes a violation and is grounds for enforcement action, permit termination, permit revocation and re-issuance, permit modification or denial of a permit renewal application.
- 2) The permittee may not use as a defense in an enforcement action that it would have been necessary for the permittee to halt or reduce the permitted activity in order to maintain compliance with the conditions of the permit.
- 3) The permit may be modified, revoked, reopened, reissued or terminated for cause. Except as provided for minor permit modifications, the filing of an application or request for a permit modification, revocation and reissuance, or termination, or the filing of a notification of planned changes or anticipated noncompliance, does not stay any permit condition.
- 4) This permit does not convey any property rights of any sort, nor grant any exclusive privilege.
- 5) The permittee shall furnish to the Air Pollution Control Program, upon receipt of a written request and within a reasonable time, any information that the Air Pollution Control Program reasonably may require to determine whether cause exists for modifying, reopening, reissuing or revoking the permit or to determine compliance with the permit. Upon request, the permittee also shall furnish to the Air Pollution Control Program copies of records required to be kept by the permittee. The permittee may make a claim of confidentiality for any information or records submitted under this rule.
- 6) Failure to comply with the limitations and conditions that qualify the installation for an Intermediate permit make the installation subject to the provisions of 10 CSR 10-6.065(6) and enforcement action for operating without a valid part 70 operating permit.

**10 CSR 10-6.065, §(5)(B)4; §(5)(C)1, §(6)(C)3.B; and §(6)(C)3.D; and §(5)(C)3 and §(6)(C)3.E.(I) – (III) and (V) – (VI) Compliance Requirements**

- 1) Any document (including reports) required to be submitted under this permit shall contain a certification signed by the responsible official.
- 2) Upon presentation of credentials and other documents as may be required by law, the permittee shall allow authorized officials of the Missouri Department of Natural Resources, or their authorized agents, to perform the following (subject to the installation's right to seek confidential treatment of information submitted to, or obtained by, the Air Pollution Control Program):
  - a) Enter upon the premises where a permitted installation is located or an emissions-related activity is conducted, or where records must be kept under the conditions of this permit;
  - b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
  - c) Inspect, at reasonable times and using reasonable safety practices, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit; and
  - d) As authorized by the Missouri Air Conservation Law, Chapter 643, RSMo or the Act, sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with the terms of this permit, and all applicable requirements as outlined in this permit.
- 3) All progress reports required under an applicable schedule of compliance shall be submitted semiannually (or more frequently if specified in the applicable requirement). These progress reports shall contain the following:
  - a) Dates for achieving the activities, milestones or compliance required in the schedule of compliance, and dates when these activities, milestones or compliance were achieved, and
  - b) An explanation of why any dates in the schedule of compliance were not or will not be met, and any preventative or corrective measures adopted.
- 4) The permittee shall submit an annual certification that it is in compliance with all of the federally enforceable terms and conditions contained in this permit, including emissions limitations, standards, or work practices. These certifications shall be submitted annually by April 1st, unless the applicable requirement specifies more frequent submission. These certifications shall be submitted to the Air Pollution Control Program, Enforcement Section, P.O. Box 176, Jefferson City, MO 65102. All deviations and exceedances must be included in the compliance certifications. The compliance certification shall include the following:
  - a) The identification of each term or condition of the permit that is the basis of the certification;
  - b) The current compliance status, as shown by monitoring data and other information reasonably available to the installation;
  - c) Whether compliance was continuous or intermittent;
  - d) The method(s) used for determining the compliance status of the installation, both currently and over the reporting period; and
  - e) Such other facts as the Air Pollution Control Program will require in order to determine the compliance status of this installation.

**10 CSR 10-6.065, §(5)(C)1 and §(6)(C)7 Emergency Provisions**

- 1) An emergency or upset as defined in 10 CSR 10-6.065(6)(C)7.A shall constitute an affirmative defense to an enforcement action brought for noncompliance with technology-based emissions limitations. To establish an emergency- or upset-based defense, the permittee must demonstrate, through properly signed, contemporaneous operating logs or other relevant evidence, the following:

- a) That an emergency or upset occurred and that the permittee can identify the source of the emergency or upset,
  - b) That the installation was being operated properly,
  - c) That the permittee took all reasonable steps to minimize emissions that exceeded technology-based emissions limitations or requirements in this permit, and
  - d) That the permittee submitted notice of the emergency to the Air Pollution Control Program within two working days of the time when emission limitations were exceeded due to the emergency. This notice must contain a description of the emergency, any steps taken to mitigate emissions, and any corrective actions taken.
- 2) Be aware that an emergency or upset shall not include noncompliance caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error.

#### **10 CSR 10-6.065(5)(C)5 Off-Permit Changes**

- 1) Except as noted below, the permittee may make any change in its permitted installation's operations, activities or emissions that is not addressed in, constrained by or prohibited by this permit without obtaining a permit revision. Off-permit changes shall be subject to the following requirements and restrictions:
- a) The change must meet all applicable requirements of the Act and may not violate any existing permit term or condition; the permittee may not change a permitted installation without a permit revision if this change is a Title I modification; Please Note: Changes at the installation which affect the emission limitation(s) classifying the installation as an intermediate source (add additional equipment to the record keeping requirements, increase the emissions above major source level) do not qualify for off-permit changes.
  - b) The permittee must provide written notice of the change to the Air Pollution Control Program, Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, as well as EPA Region VII, 901 North 5th Street, Kansas City, Kansas 66101, no later than the next annual emissions report. This written notice shall describe each change, including the date, any change in emissions, pollutants emitted and any applicable requirement that would apply as a result of the change; and
  - c) The permittee shall keep a record describing all changes made at the installation that result in emissions of a regulated air pollutant subject to an applicable requirement and the emissions resulting from these changes.

#### **10 CSR 10-6.020(2)(R)12 Responsible Official**

The application utilized in the preparation of this permit was signed by Michael Gromacki, Manufacturing Director. If this person terminates employment, or is reassigned different duties such that a different person becomes the responsible person to represent and bind the installation in environmental permitting affairs, the owner or operator of this air contaminant source shall notify the Director of the Air Pollution Control Program of the change. Said notification shall be in writing and shall be submitted within 30 days of the change. The notification shall include the name and title of the new person assigned by the source owner or operator to represent and bind the installation in environmental permitting affairs. All representations, agreement to terms and conditions and covenants made by the former responsible person that were used in the establishment of limiting permit conditions on this permit will continue to be binding on the installation until such time that a revision to this permit is obtained that would change said representations, agreements and covenants.

**10 CSR 10-6.065 §(5)(E)4 and §(6)(E)6.A(III)(a)-(c) Reopening-Permit for Cause**

This permit may be reopened for cause if:

- 1) The Missouri Department of Natural Resources (MDNR) or EPA determines that the permit contains a material mistake or that inaccurate statements were made which resulted in establishing the emissions limitation standards or other terms of the permit,
- 2) Additional applicable requirements under the Act become applicable to the installation; however, reopening on this ground is not required if—:
  - a) The permit has a remaining term of less than three years;
  - b) The effective date of the requirement is later than the date on which the permit is due to expire;  
or
  - c) The additional applicable requirements are implemented in a general permit that is applicable to the installation and the installation receives authorization for coverage under that general permit,
- 3) MDNR or EPA determines that the permit must be reopened and revised to assure compliance with applicable requirements.

**10 CSR 10-6.065 §(5)(E)1.A and §(6)(E)1.C Statement of Basis**

This permit is accompanied by a statement setting forth the legal and factual basis for the draft permit conditions (including references to applicable statutory or regulatory provisions). This Statement of Basis, while referenced by the permit, is not an actual part of the permit.

## VI. Attachments

### Attachment A

Calculations to demonstrate compliance with 10 CSR 10-2.040.

| Emission Unit | Heat Input (MMBtu/hr) | Emission Factor* (lb/MMscf) | MHDR** (MMscf/hr) | PTE (lb/MMBtu) | Emission Limit*** (lb/MMBtu) |
|---------------|-----------------------|-----------------------------|-------------------|----------------|------------------------------|
| EU0010        | 21.90                 | 7.60                        | 0.0219            | 0.0076         | 0.39                         |
| EU0020        | 21.90                 | 7.60                        | 0.0219            | 0.0076         | 0.39                         |
| EU0030        | 4.00                  | 7.60                        | 0.0040            | 0.0076         | 0.39                         |
| EU0040        | 4.00                  | 7.60                        | 0.0040            | 0.0076         | 0.39                         |
| EU1090        | 12.00                 | 7.60                        | --                | 0.0075         | 0.23                         |

\*AP-42, table 1.4-2

\*\*As reported in the 2005 EIQ, converted to scf assuming 0.25 psi delivery pressure

\*\*\*As calculated from 10 CSR 10-2.040

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## Attachment B

[illegible]



## Attachment C

[illegible]

**Attachment D**

| Method 9 Opacity Emissions Observations |                             |
|-----------------------------------------|-----------------------------|
| Company                                 | Observer                    |
| Location                                | Observer Certification Date |
| Date                                    | Emission Unit               |
| Time                                    | Control Device              |

| Hour | Minute | Seconds |    |    |    | Steam Plume (check if applicable) |          | Comments |
|------|--------|---------|----|----|----|-----------------------------------|----------|----------|
|      |        | 0       | 15 | 30 | 45 | Attached                          | Detached |          |
|      | 0      |         |    |    |    |                                   |          |          |
|      | 1      |         |    |    |    |                                   |          |          |
|      | 2      |         |    |    |    |                                   |          |          |
|      | 3      |         |    |    |    |                                   |          |          |
|      | 4      |         |    |    |    |                                   |          |          |
|      | 5      |         |    |    |    |                                   |          |          |
|      | 6      |         |    |    |    |                                   |          |          |
|      | 7      |         |    |    |    |                                   |          |          |
|      | 8      |         |    |    |    |                                   |          |          |
|      | 9      |         |    |    |    |                                   |          |          |
|      | 10     |         |    |    |    |                                   |          |          |
|      | 11     |         |    |    |    |                                   |          |          |
|      | 12     |         |    |    |    |                                   |          |          |
|      | 13     |         |    |    |    |                                   |          |          |
|      | 14     |         |    |    |    |                                   |          |          |
|      | 15     |         |    |    |    |                                   |          |          |
|      | 16     |         |    |    |    |                                   |          |          |
|      | 17     |         |    |    |    |                                   |          |          |
|      | 18     |         |    |    |    |                                   |          |          |

| SUMMARY OF AVERAGE OPACITY |       |     |         |         |
|----------------------------|-------|-----|---------|---------|
| Set Number                 | Time  |     | Opacity |         |
|                            | Start | End | Sum     | Average |
|                            |       |     |         |         |
|                            |       |     |         |         |
|                            |       |     |         |         |

Readings ranged from \_\_\_\_\_ to \_\_\_\_\_ % opacity.

Was the emission unit in compliance at the time of evaluation?    YES    NO

\_\_\_\_\_  
Signature of Observer

### Attachment E

Construction Permit #052000-007A and #082001-020 require that the operating pressure drop of the baghouses be maintained within manufacturer specifications. The following table provides operating ranges for these baghouses. These values exclude periods of startup, shutdown and malfunction.

| Baghouse Manufacturer Suggested Operating Range |                                       |
|-------------------------------------------------|---------------------------------------|
|                                                 | Pressure Drop Range (inches of water) |
| Small Batch Baghouse                            | 0.5 to 4                              |
| Big Batch Baghouse                              | 0.5 to 4                              |
| Powder Raw Material Baghouse                    | 1 to 8                                |
| Powder Finished Goods Baghouse                  | 1 to 8                                |

Draft

**Attachment F**

**Malfunction and Repair Log**

**Date:** \_\_\_\_\_

**Incident of Malfunction:** \_\_\_\_\_

**Impact on Emissions:** \_\_\_\_\_

**Duration of Event:** \_\_\_\_\_

**Probable Cause:** \_\_\_\_\_

**Corrective Actions:** \_\_\_\_\_

Draft

### Attachment G

The following tables demonstrate compliance with 10 CSR 10-6.400:

| Small Batch Area |                                   |                                                |                            |
|------------------|-----------------------------------|------------------------------------------------|----------------------------|
| Emission Unit    | Unit Description                  | Maximum Uncontrolled PM Emission Rate (lbs/hr) | PM Emission Limit (lbs/hr) |
| EU0680           | Gel Coat Colorant Dispersion Tank | 0.2292                                         | 0.7318                     |
| EU0690           | Gel Coat Colorant Dispersion Tank | 0.2292                                         | 0.7318                     |
| EU0700           | Gel Coat Portable Tank Dispersion | 0.0521                                         | 0.2712                     |
| EU0710           | Gel Coat Portable Tank Dispersion | 0.0521                                         | 0.2712                     |
| EU0720           | Gel Coat Portable Tank Dispersion | 0.0521                                         | 0.2712                     |
| EU0730           | Gel Coat Portable Tank Dispersion | 0.0521                                         | 0.2712                     |
| EU0740           | Gel Coat Portable Tank Dispersion | 0.0521                                         | 0.2712                     |
| EU0750           | Gel Coat Portable Tank Dispersion | 0.0521                                         | 0.2712                     |
| EU0760           | Gel Coat Drum Dispersion          | 0.0115                                         | 0.0983                     |
| EU0830           | Gel Coat Drum Dispersion          | 0.0115                                         | 0.0983                     |
| EU0840           | Gel Coat Drum Dispersion          | 0.0115                                         | 0.0983                     |
| EU0850           | Gel Coat Dispersion Tank          | 0.1375                                         | 0.5197                     |
| EU0860           | Neutral Gel Coat Dispersion Tank  | 0.1375                                         | 0.5197                     |
| EU0870           | Gel Coat Dispersion Tank          | 0.4167                                         | 1.0924                     |
| EU0880           | Gel Coat Drum Dispersion          | 0.0115                                         | 0.0983                     |
| EU0890           | Gel Coat Drum Dispersion          | 0.0521                                         | 0.2712                     |
| EU0900           | Neutral Gel Coat Dispersion Tank  | 0.2292                                         | 0.7318                     |
| EU0910           | Neutral Gel Coat Dispersion Tank  | 0.2292                                         | 0.7318                     |
| EU0920           | Gel Coat Dispersion Tank          | 0.0917                                         | 0.3961                     |
| EU0930           | Gel Coat Dispersion Tank          | 0.0917                                         | 0.3961                     |
| EU0940           | Gel Coat Dispersion Tank          | 0.1146                                         | 0.4600                     |
| EU0950           | Gel Coat Dispersion Tank          | 0.1146                                         | 0.4600                     |
| EU0960           | Gel Coat Dispersion Tank          | 0.1146                                         | 0.4600                     |
| EU0970           | Gel Coat Dispersion Tank          | 0.1146                                         | 0.4600                     |
| EU0980           | Gel Coat Dispersion Tank          | 0.1146                                         | 0.4600                     |
| EU0990           | Gel Coat Dispersion Tank          | 0.1146                                         | 0.4600                     |
| EU1000           | Gel Coat Dispersion Tank          | 0.5000                                         | 1.2343                     |
| EU1010           | Gel Coat Dispersion Tank          | 0.5000                                         | 1.2343                     |
| EU1020           | Gel Coat Dispersion Tank          | 0.4479                                         | 1.1466                     |
| EU1030           | Gel Coat Dispersion Tank          | 0.4479                                         | 1.1466                     |

| Big Batch Area |                               |                                                |                            |
|----------------|-------------------------------|------------------------------------------------|----------------------------|
| Emission Unit  | Unit Description              | Maximum Uncontrolled PM Emission Rate (lbs/hr) | PM Emission Limit (lbs/hr) |
| EU1080         | Gel Coat Dispersion Tank (60) | 2.0625                                         | 3.1897                     |
| EU1090         | Gel Coat Dispersion Tank (90) | 3.1250                                         | 4.2137                     |
| EU1100         | Gel Coat Dispersion Tank (60) | 2.0625                                         | 3.1897                     |
| EU1110         | Gel Coat Dispersion Tank (90) | 3.1250                                         | 4.2137                     |
| EU1120         | Gel Coat Dispersion Tank      | 0.1146                                         | 0.4600                     |
| EU1130         | Gel Coat Dispersion Tank      | 0.1490                                         | 0.5484                     |
| EU1140         | Gel Coat Dispersion Tank      | 0.1146                                         | 0.4600                     |
| EU1150         | Gel Coat Dispersion Tank      | 0.1490                                         | 0.5484                     |
| EU1160         | Gel Coat Dispersion Tank      | 0.2292                                         | 0.7318                     |
| EU1170         | Gel Coat Dispersion Tank      | 0.2292                                         | 0.7318                     |
| EU1180         | Gel Coat Dispersion Tank      | 0.2292                                         | 0.7318                     |
| EU1190         | Gel Coat Dispersion Tank      | 0.2292                                         | 0.7318                     |
| EU1200         | Gel Coat Dispersion Tank      | 0.0917                                         | 0.3961                     |
| EU1210         | Gel Coat Dispersion Tank      | 0.1146                                         | 0.4600                     |
| EU1220         | Gel Coat Dispersion Tank      | 0.1146                                         | 0.4600                     |
| EU1230         | Gel Coat Dispersion Tank      | 0.1146                                         | 0.4600                     |
| EU1240         | Gel Coat Dispersion Tank      | 0.1146                                         | 0.4600                     |
| EU1250         | Gel Coat Dispersion Tank      | 0.1146                                         | 0.4600                     |
| EU1260         | Gel Coat Dispersion Tank      | 0.1146                                         | 0.4600                     |
| EU1270         | Gel Coat Dispersion Tank      | 0.1146                                         | 0.4600                     |
| EU1280         | Gel Coat Dispersion Tank      | 0.1146                                         | 0.4600                     |
| EU1290         | Gel Coat Dispersion Tank      | 0.1490                                         | 0.5484                     |
| EU1300         | Gel Coat Dispersion Tank      | 0.1146                                         | 0.4600                     |
| EU1310         | Gel Coat Dispersion Tank      | 0.1490                                         | 0.5484                     |

## Attachment H

The following calculations demonstrate that the Emergency Generator (EU1560) is always in compliance with 10 CSR 10-6.260, *Restriction of Emission of Sulfur Compounds*:

### General Equation and Basis

$$SO_2 (ppmv) = EF \left( \frac{lbs}{MMBtu} \right) \times F_{factor} \left( \frac{MMBtu}{wscf} \right) \times \left( \frac{wscf}{lbs} \right) \times \left( \frac{ppmw}{ppmw} \right)$$

- 1)  $SO_2$  emission factor for diesel engines < 600 HP,  $EF = 0.29 \left( \frac{lbs}{MMBtu} \right)$  (From AP-42 Table 3.3-1)
- 2) The F factor is the ratio of gas volume of products of combustion to the heat content of the fuel. For fuel oil:  $F_{factor} = \left( \frac{1 MMBtu}{10,320 wscf} \right)$  (From Part 60 Appendix A Method 19 Table 19-2)
- 3) Conversion factor for lb/scf to ppm,  $\left( \frac{ppm}{1.660E^{-7} lb / scf} \right)$

(From Part 60 Appendix A Method 19 Table 19-1)

$$\text{Conversion factor for ppmw to ppmv, } \frac{\left( \frac{28.8}{MW_{SO_2}} \right)}{1 ppmw} = \frac{\left( \frac{28.8}{64.0} \right) ppmv}{ppmw} = \left( \frac{0.45 ppmv}{ppmw} \right)$$

(From AP-42 Appendix A)

### Compliance Demonstration

$$ppmv SO_2 = \left( \frac{0.29 lb}{MMBtu} \right) \times \left( \frac{MMBtu}{10,320 wscf} \right) \times \left( \frac{ppmw}{1.667E^{-7} lb / scf} \right) \times \left( \frac{0.45 ppmv}{ppmw} \right) = 76 ppmv$$

76 ppmv  $SO_2$  << 500 ppmv  $SO_2$ , therefore EU1560 is always in compliance.

## Attachment I

### Facility Emissions Summary for VOCs and HAPs

The following tables summarize the calculations that demonstrate that, when in compliance with the voluntary permit condition (PW001), the facility will be below the major source thresholds at maximum production.

| Process                   | HAP                 | Potential Emissions (tpy)* |
|---------------------------|---------------------|----------------------------|
| Pilot Lab                 | Ethyl Acrylate      | 1.45E-03                   |
|                           | Ethyl Benzene       | 1.68E-03                   |
|                           | Ethylene Glycol     | 8.61E-03                   |
|                           | Glycol Ethers       | 1.13E-02                   |
|                           | Methyl Ethyl Ketone | 3.63E-03                   |
|                           | Xylene              | 8.83E-03                   |
|                           | Toluene             | 1.76E-02                   |
| Gel Coat Small Batch      | Cobalt              | 1.54E-02                   |
|                           | Cumene              | 2.81E-03                   |
| Gel Coat Big Batch        | Cobalt              | 7.19E-03                   |
|                           | Cumene              | 1.321E-03                  |
| Resin Production          | Ethylbenzene        | 1.02E-03                   |
|                           | Ethylene Glycol     | 1.32E-03                   |
|                           | Hydroquinone        | 2.26E-04                   |
|                           | Maleic Anhydride    | 3.07E-01                   |
|                           | Methanol            | 1.33E-04                   |
|                           | N,N-Dimethylaniline | 6.48E-04                   |
|                           | Phthalic Anhydride  | 3.03E-05                   |
|                           | Xylene              | 5.36E-03                   |
| Powder Coating Production | Ethylene Glycol     | 1.23E-01                   |
| Miscellaneous Operations  | Cobalt              | 1.02E-05                   |
|                           | Cumene              | 1.87E-06                   |
|                           | Maleic Anhydride    | 2.43E-01                   |
|                           | Methyl Ethyl Ketone | 6.66E-02                   |
|                           | Xylene              | 1.29E-02                   |
| Voluntary Emission Limits | Styrene             | 10                         |
|                           | Methyl Methacrylate | 10                         |
| <b>Total</b>              |                     | <b>20.841</b>              |

\*All HAP emissions are uncontrolled potentials except for the 60s & 90s big batch gel coat, resin and powder coating production, which have controls required by permit.



| Process                   | Potential VOC Emissions (tpy)* |
|---------------------------|--------------------------------|
| Combustion                | 1.855                          |
| Pilot Lab                 | 0.451                          |
| Gel Coat Small Batch      | 22.419                         |
| Gel Coat Big Batch        | 10.977                         |
| Resin Production          | 2.595                          |
| Powder Coating Production | 0.822                          |
| Miscellaneous Operations  | 4.719                          |
| <b>Total VOC PTE</b>      | <b>43.837</b>                  |

*\*All VOC emissions are uncontrolled potentials except the 60s & 90s big batch gel coat, resin and powder coating production, which have controls required by permit.*

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## Potential Emissions Calculations for HAPs and VOCs at Maximum Production Capability

### Combustion

| Emission Unit                | MHDR (MMBtu/hr) | Emission Factor (lb/MMft <sup>3</sup> ) | Uncontrolled PTE (ton VOC/yr) |
|------------------------------|-----------------|-----------------------------------------|-------------------------------|
| Kettle Furnace-84            | 4               | 2.8                                     | 0.0483                        |
| Kettle Furnace-86            | 4               | 2.8                                     | 0.0483                        |
| Boiler #1                    | 21.9            | 5.5                                     | 0.5198                        |
| Boiler #2                    | 21.9            | 5.5                                     | 0.5198                        |
| Thermal Oxidizer             | 8.4             | 5.5                                     | 0.1994                        |
| Hot Oil Heater               | 12              | 2.8                                     | 0.1450                        |
| Thermal Oxidizer (pilot lab) | 0.5             | 5.5                                     | 0.0119                        |
| Emergency Generator          | 587 Hp          | 0.00247lb/Hp-hr                         | 0.3625                        |
| <b>Total</b>                 |                 |                                         | <b>1.855</b>                  |

### Pilot Lab

#### Reactor

| ID           | Description | Capacity (gal) | Lbs/Batch | Maximum Throughput (lbs) | Emission Factor <sup>1</sup> (lb/ton) | Uncontrolled PTE (ton VOC/yr) |
|--------------|-------------|----------------|-----------|--------------------------|---------------------------------------|-------------------------------|
| T1401        | Reactor     | 60             | 570       | 171,000                  | 4.8                                   | 0.2052                        |
| T2401        | Reactor     | 10             | 95        | 28,500                   | 4.8                                   | 0.0342                        |
| <b>Total</b> |             |                |           | <b>199,500</b>           |                                       | <b>0.2394</b>                 |

<sup>1</sup> Emission Factor derived from SCC Factors 3-01-018-38 Polyester/Alkyd Resins: Reactor Kettle

#### Thin Tanks

| ID           | Description | Capacity (gal) | Maximum Throughput (lbs) | Emission Factor <sup>1</sup> (lb/ton) | Uncontrolled PTE (ton VOC/yr) |
|--------------|-------------|----------------|--------------------------|---------------------------------------|-------------------------------|
| T1601        | Thin Tank   | 120            | 128,908                  | 6.7                                   | 0.08637                       |
| T1701        | Thin Tank   | 120            | 128,908                  | 6.7                                   | 0.08637                       |
| T2601        | Thin Tank   | 20             | 21,485                   | 6.7                                   | 0.01440                       |
| <b>Total</b> |             |                | <b>279,300</b>           |                                       | <b>0.18714</b>                |

<sup>1</sup> Emission Factor derived from SCC Factors 3-01-018-39 Polyester/Alkyd Resins: Resin Thinning Tank. The emission factor for the thin tanks corresponds to lbs VOC/ton Solvent. Assume 40% solvent in batch.

### Loading Loss

| Solvent                        | Maximum Usage (lbs) | Product Loaded <sup>1</sup> (lbs) | Product Loaded <sup>2</sup> (gal) | Filling Pressure <sup>3</sup> (psia) | Molecular Weight | Uncontrolled PTE <sup>5</sup> (ton VOC/yr) |
|--------------------------------|---------------------|-----------------------------------|-----------------------------------|--------------------------------------|------------------|--------------------------------------------|
| 80% Xylene / 20% Ethylbenzene  | 2,277               | 7,969                             | 839                               | 0.450                                | 106.17           | 5.94E-04                                   |
| Toluene                        | 7,595               | 26,584                            | 2,798                             | 1.288                                | 92.14            | 4.92E-03                                   |
| n-Butyl Alcohol                | 268                 | 936                               | 99                                | 0.600                                | 74.12            | 6.49E-05                                   |
| Heavy Aromatic Solvent         | 481                 | 1,682                             | 177                               | 0.138                                | 100.00           | 3.60E-05                                   |
| Naphtha                        |                     |                                   |                                   |                                      |                  |                                            |
| Methyl Ethyl Ketone            | 1,152               | 4,032                             | 424                               | 3.750                                | 72.11            | 1.70E-03                                   |
| Light Aromatic Solvent         | 7,978               | 27,922                            | 2,939                             | 0.225                                | 100.00           | 9.79E-04                                   |
| Naphtha                        |                     |                                   |                                   |                                      |                  |                                            |
| Medium Aliphatic Solvent       | 977                 | 3,421                             | 360                               | 0.075                                | 142.00           | 5.68E-05                                   |
| Naphtha (mineral spirits)      |                     |                                   |                                   |                                      |                  |                                            |
| Ethylene Glycol                | 5,231               | 18,309                            | 1,927                             | 0.075                                | 118.18           | 2.53E-04                                   |
| Monobutyl Ether                |                     |                                   |                                   |                                      |                  |                                            |
| Isopropyl Alcohol              | 2,474               | 8,657                             | 911                               | 2.880                                | 60.09            | 2.34E-03                                   |
| n-Butyl Acetate                | 4,789               | 16,761                            | 1,764                             | 0.625                                | 116.16           | 1.90E-03                                   |
| 2-Ethyl Hexanol                | 153                 | 535                               | 56                                | 0.038                                | 130.23           | 4.07E-06                                   |
| Dipropylene Glycol             | 1,431               | 5,007                             | 527                               | 0.049                                | 148.20           | 5.64E-05                                   |
| Monomethyl Ether               |                     |                                   |                                   |                                      |                  |                                            |
| Propylene Glycol               | 2,381               | 8,333                             | 877                               | 0.313                                | 116.20           | 4.72E-04                                   |
| Monopropyl Ether               |                     |                                   |                                   |                                      |                  |                                            |
| Methyl n-Amyl Ketone           | 852                 | 2,981                             | 314                               | 0.213                                | 114.19           | 1.13E-04                                   |
| Secondary Butyl Alcohol        | 1,813               | 6,345                             | 668                               | 1.300                                | 74.12            | 9.53E-04                                   |
| Propylene Glycol               | 4,412               | 15,442                            | 1,625                             | 0.313                                | 132.20           | 9.94E-04                                   |
| Monomethyl Ether Acetate       |                     |                                   |                                   |                                      |                  |                                            |
| Aromatic 200 Solvent           | 1,365               | 4,778                             | 503                               | 0.138                                | 100.00           | 1.02E-04                                   |
| Poly Alkyl Glycol Butyl Ether  | 2,255               | 7,893                             | 831                               | 0.000                                | 270.00           | 5.32E-07                                   |
| Styrene                        | 24,741              | 86,593                            | 9,115                             | 0.391                                | 104.15           | 5.50E-03                                   |
| Ethyl Acrylate                 | 546                 | 1,911                             | 201                               | 1.788                                | 100.11           | 5.33E-04                                   |
| Miscellaneous VOC <sup>4</sup> | 6,631               | 23,208                            | 2,443                             | 0.625                                | 116.16           | 2.63E-03                                   |
| <b>Total</b>                   | <b>79,800</b>       |                                   |                                   |                                      |                  | <b>2.42E-02</b>                            |

<sup>1</sup> Assume organic resins contain approximately 40 percent solvent.

<sup>2</sup> It is assumed that the total volume loaded out may be determined by dividing the organic resin thinned in solvent by a weighted average density of 9.5 lbs per gallon.

<sup>3</sup> Partial pressures were previously determined using Raoult's Law by CFR, L.L.C.

<sup>4</sup> Miscellaneous VOC conservatively assumed to be represented by n-Butyl Acetate

<sup>5</sup> Loading Loss Emissions calculated using AP-42 Section 5.2, equation 1; Assume a loading temperature of 150°F

**Reactor**

| HAP             | Emission Factor<br>(lb HAP/ton resin) | Uncontrolled PTE<br>(lb HAP/yr) | Uncontrolled PTE<br>(ton HAP/yr) |
|-----------------|---------------------------------------|---------------------------------|----------------------------------|
| Ethyl Benzene   | 0.0176                                | 1.7551                          | 0.0009                           |
| Ethylene Glycol | 0.1727                                | 17.2237                         | 0.0086                           |
| Glycol Ethers   | 0.2266                                | 22.6061                         | 0.0113                           |
| Xylene          | 0.0941                                | 9.3841                          | 0.0047                           |

**Thin Tanks**

| HAP                 | Emission Factor<br>(lb HAP/ton resin) | Uncontrolled PTE<br>(lb HAP/yr) | Uncontrolled PTE<br>(ton HAP/yr) |
|---------------------|---------------------------------------|---------------------------------|----------------------------------|
| Ethyl Acrylate      | 0.0131                                | 1.8292                          | 0.0009                           |
| Ethyl Benzene       | 0.0098                                | 1.3719                          | 0.0007                           |
| Methyl Ethyl Ketone | 0.0276                                | 3.8597                          | 0.0019                           |
| Xylene              | 0.0525                                | 7.3352                          | 0.0037                           |
| Toluene             | 0.1822                                | 25.4447                         | 0.0127                           |

**Pilot Lab VOC Summary**

| Source       | VOC Emissions (tpy) |
|--------------|---------------------|
| Reactor      | 0.239               |
| Thin Tanks   | 0.187               |
| Loading Loss | 2.42E-02            |
| <b>Total</b> | <b>0.451</b>        |

**Pilot Lab HAP Summary**

| HAP                 | HAP Emissions (tpy)* |
|---------------------|----------------------|
| Ethyl Acrylate      | 1.45E-03             |
| Ethyl Benzene       | 1.68E-03             |
| Ethylene Glycol     | 8.61E-03             |
| Glycol Ethers       | 1.13E-02             |
| Methyl Ethyl Ketone | 3.63E-03             |
| Xylene              | 8.83E-03             |
| Toluene             | 1.76E-02             |

### Gel Coat Small Batch

| Total Capacity<br>(gal) | Lbs/Batch | Maximum<br>Throughput <sup>2</sup> (lbs) | Emission<br>Factor <sup>1</sup> (lb/ton) | Uncontrolled PTE (ton<br>VOC/yr) |
|-------------------------|-----------|------------------------------------------|------------------------------------------|----------------------------------|
| 42,129                  | 463,419   | 56,382,645                               | 1.5                                      | <b>21.143</b>                    |

<sup>1</sup> Emission factor developed by CCP (refer to Permit Number 052000-007; Project Number 1999-06-014).

<sup>2</sup> Based on a 72 hour cycle time; limiting factors are filtering and packaging capability.

### Loading Loss

| Raw Material                      | Maximum<br>Product<br>Loaded <sup>1</sup> (lbs) | Maximum<br>Product<br>Loaded <sup>2</sup> (gal) | Filling<br>Pressure <sup>3</sup> (psia) | Molecular<br>Weight | Uncontrolled PTE <sup>5</sup><br>(ton VOC/yr) |
|-----------------------------------|-------------------------------------------------|-------------------------------------------------|-----------------------------------------|---------------------|-----------------------------------------------|
| Styrene                           | 4,510,6116                                      | 4,100,556                                       | 0.1036                                  | 104                 | 0.7127                                        |
| Methyl<br>Methacrylate            | 7,047,831                                       | 640,711                                         | 0.5356                                  | 100                 | 0.5536                                        |
| Miscellaneous<br>VOC <sup>4</sup> | 4,228,698                                       | 384,427                                         | 0.00988                                 | 148.2               | 0.0091                                        |
| <b>Total</b>                      | <b>56,382,645</b>                               |                                                 |                                         |                     | <b>1.275</b>                                  |

<sup>1</sup> Assume gel coat contains approximately 40 percent solvent. Therefore, assume for the purpose of estimating emissions that the amount of gel coat containing the specific solvent may be determined by dividing the amount of solvent used by 40 percent.

<sup>2</sup> It is assumed that the total volume loaded out may be determined by dividing the gel coat by a weighted average density of 11 lbs per gallon.

<sup>3</sup> Partial pressures were determined using Raoult's Law.

<sup>4</sup> Assume miscellaneous VOC emissions are represented by the constituent dipropylene glycol monomethyl ether.

<sup>5</sup> Loading Loss Emissions calculated using AP-42 Section 5.2 equation 1, assuming a filling temperature of 100°F

| HAP    | Emission Factor<br>(lb HAP/ton gel coat) | Uncontrolled PTE<br>(lb HAP/yr) | Uncontrolled PTE<br>(ton HAP/yr) |
|--------|------------------------------------------|---------------------------------|----------------------------------|
| Cobalt | 0.0011                                   | 30.736                          | 1.54E-02                         |
| Cumene | 0.0002                                   | 5.621                           | 2.81E-03                         |

### Gel Coat Small Batch VOC Summary

| Source          | VOC Emissions (tpy) |
|-----------------|---------------------|
| Process Vessels | 21.143              |
| Loading Loss    | 1.275               |
| <b>Total</b>    | <b>22.419</b>       |

**Gel Coat Big Batch**

**10s & 20s**

| ID           | Description | Capacity<br>(gal) | Lbs/Batch | Maximum<br>Throughput <sup>2</sup><br>(lbs) | Emission<br>Factor <sup>1</sup><br>(lb/ton) | Uncontrolled PTE<br>(ton VOC/yr) |
|--------------|-------------|-------------------|-----------|---------------------------------------------|---------------------------------------------|----------------------------------|
| G5101        | 10 Drum     | 550               | 6,050     | 736,083                                     | 1.5                                         | 0.2760                           |
| G5102        | 13 Drum     | 715               | 7,865     | 956,908                                     | 1.5                                         | 0.3588                           |
| G5103        | 10 Drum     | 550               | 6,050     | 736,083                                     | 1.5                                         | 0.2760                           |
| G5104        | 13 Drum     | 715               | 7,865     | 956,908                                     | 1.5                                         | 0.3588                           |
| G5201        | 20 Drum     | 1,100             | 12,100    | 1,472,167                                   | 1.5                                         | 0.5521                           |
| G5202        | 20 Drum     | 1,100             | 12,100    | 1,472,167                                   | 1.5                                         | 0.5521                           |
| G5203        | 20 Drum     | 1,100             | 12,100    | 1,472,167                                   | 1.5                                         | 0.5521                           |
| G5204        | 20 Drum     | 1,100             | 12,100    | 1,472,167                                   | 1.5                                         | 0.5521                           |
| G5301        | 8 Drum      | 440               | 4,840     | 588,867                                     | 1.5                                         | 0.2208                           |
| G5302        | 10 Drum     | 550               | 6,050     | 736,083                                     | 1.5                                         | 0.2760                           |
| G5303        | 10 Drum     | 550               | 6,050     | 736,083                                     | 1.5                                         | 0.2760                           |
| G5304        | 10 Drum     | 550               | 6,050     | 736,083                                     | 1.5                                         | 0.2760                           |
| G5401        | 10 Drum     | 550               | 6,050     | 736,083                                     | 1.5                                         | 0.2760                           |
| G5402        | 10 Drum     | 550               | 6,050     | 736,083                                     | 1.5                                         | 0.2760                           |
| G5403        | 10 Drum     | 550               | 6,050     | 736,083                                     | 1.5                                         | 0.2760                           |
| G5404        | 10 Drum     | 550               | 6,050     | 736,083                                     | 1.5                                         | 0.2760                           |
| G5501        | 10 Drum     | 550               | 6,050     | 736,083                                     | 1.5                                         | 0.2760                           |
| G5502        | 13 Drum     | 715               | 7,865     | 956,908                                     | 1.5                                         | 0.3588                           |
| G5503        | 10 Drum     | 550               | 6,050     | 736,083                                     | 1.5                                         | 0.2760                           |
| G5504        | 13 Drum     | 715               | 7,865     | 956,908                                     | 1.5                                         | 0.3588                           |
| <b>Total</b> |             |                   |           | <b>18,402,083</b>                           |                                             | <b>6.901</b>                     |

<sup>1</sup> Emission factor developed by CCP (refer to Permit Number 052000-007; Project Number 1999-06-014).

<sup>2</sup> Permit Number 052000-007 indirectly limits production from the 10, 20, 60 & 90's to 48,402,083 pounds per year (assuming a gel coat density of 11 pounds per gallon). Throughput is evenly distributed between production units. Based on a 72 hour cycle time; limiting factors are pumps, filtering, and packaging capability.

**60s & 90s**

| ID           | Description | Capacity<br>(gal) | Lbs/Batch | Maximum<br>Throughput <sup>2</sup><br>(lbs) | Emission<br>Factor <sup>1</sup><br>(lb/ton) | Controlled PTE<br>(ton VOC/yr) |
|--------------|-------------|-------------------|-----------|---------------------------------------------|---------------------------------------------|--------------------------------|
| G5601        | 60 Drum     | 3,300             | 36,300    | 5,963,855                                   | 1.5                                         | 0.59                           |
| G5701        | 90 Drum     | 5,000             | 55,000    | 9,036,145                                   | 1.5                                         | 0.90                           |
| G5801        | 60 Drum     | 3,300             | 36,300    | 5,963,855                                   | 1.5                                         | 0.59                           |
| G5901        | 90 Drum     | 5,000             | 55,000    | 9,036,145                                   | 1.5                                         | 0.90                           |
| <b>Total</b> |             |                   |           | <b>30,000,000</b>                           |                                             | <b>2.98</b>                    |

<sup>1</sup> Emission factor developed by CCP (refer to Permit Number 052000-007; Project Number 1999-06-014).

<sup>2</sup> Permit Number 052000-007 indirectly limits production from the 10, 20, 60 & 90's to 48,402,083 pounds per year (assuming a gel coat density of 11 pounds per gallon). Throughput is evenly distributed between production units.

### ***Loading Loss***

| <b>Raw Material</b>            | <b>Maximum Product Loaded<sup>1</sup><br/>(lbs)</b> | <b>Maximum Product Loaded<sup>2</sup><br/>(gal)</b> | <b>Filling Pressure<sup>3</sup><br/>(psia)</b> | <b>Molecular Weight</b> | <b>Uncontrolled PTE<br/>(lb VOC/yr)</b> | <b>Uncontrolled PTE<sup>5</sup><br/>(ton VOC/yr)</b> |
|--------------------------------|-----------------------------------------------------|-----------------------------------------------------|------------------------------------------------|-------------------------|-----------------------------------------|------------------------------------------------------|
| Styrene                        | 38,721,666                                          | 3,520,151                                           | 0.1036                                         | 104                     | 1223.64                                 | 0.6118                                               |
| Methyl Methacrylate            | 6,050,260                                           | 550,024                                             | 0.5356                                         | 100                     | 950.43                                  | 0.4752                                               |
| Miscellaneous VOC <sup>4</sup> | 3,630,156                                           | 330,014                                             | 0.00988                                        | 148.2                   | 15.59                                   | 0.0078                                               |
| <b>Total</b>                   | <b>48,402,083</b>                                   |                                                     |                                                |                         |                                         | <b>1.095</b>                                         |

<sup>1</sup> Assume gel coat contains approximately 40 percent solvent. Therefore, assume for the purpose of estimating emissions that the amount of gel coat containing the specific solvent may be determined by dividing the amount of solvent used by 40 percent.

<sup>2</sup> It is assumed that the total volume loaded out may be determined by dividing the gel coat by a weighted average density of 11 lbs per gallon.

<sup>3</sup> Partial pressures were determined using Raoult's Law

<sup>4</sup> Assume miscellaneous VOC emissions are represented by the constituent dipropylene glycol monomethyl ether.

<sup>5</sup> Loading Loss Emissions calculated from AP-42 Section 5.2 equation 1, assuming 100°F filling temperature.

### ***60s & 90s***

| <b>HAP</b> | <b>Emission Factor<br/>(lb HAP/ton gel coat)</b> | <b>Uncontrolled PTE<br/>(lb HAP/yr)</b> | <b>Uncontrolled PTE<br/>(ton HAP/yr)</b> |
|------------|--------------------------------------------------|-----------------------------------------|------------------------------------------|
| Cobalt     | 1.09E-03                                         | 16.354                                  | 2.17E-03                                 |
| Cumene     | 1.99E-04                                         | 2.991                                   | 3.96E-04                                 |

### ***10s & 20s***

| <b>HAP</b> | <b>Emission Factor<br/>(lb HAP/ton gel coat)</b> | <b>Uncontrolled PTE<br/>(lb HAP/yr)</b> | <b>Uncontrolled PTE<br/>(ton HAP/yr)</b> |
|------------|--------------------------------------------------|-----------------------------------------|------------------------------------------|
| Cobalt     | 1.09E-03                                         | 10.031                                  | 5.02E-03                                 |
| Cumene     | 1.99E-04                                         | 1.835                                   | 9.17E-04                                 |

### ***Gel Coat Big Batch VOC Summary***

| <b>Source</b> | <b>VOC Emissions (tpy)</b> |
|---------------|----------------------------|
| 10s & 20s     | 6.901                      |
| 60s & 90s     | 2.98                       |
| Loading Loss  | 1.095                      |
| <b>Total</b>  | <b>10.977</b>              |

### ***Gel Coat Big Batch HAP Summary***

| <b>HAP</b> | <b>Potential Emissions (tpy)*</b> |
|------------|-----------------------------------|
| Cobalt     | 7.19E-03                          |
| Cumene     | 1.32E-03                          |

## Resin Production

### *Reactors*

| ID           | Description | Capacity |                        | Maximum<br>Throughput (lbs) | Emission Factor <sup>1</sup><br>(lb/ton) | Controlled PTE<br>(ton VOC/yr) |
|--------------|-------------|----------|------------------------|-----------------------------|------------------------------------------|--------------------------------|
|              |             | (gal)    | Lbs/Batch <sup>2</sup> |                             |                                          |                                |
| K8400        | Reactor     | 4,000    | 37,000                 | 16,206,000                  | 4.8                                      | 0.39                           |
| K8600        | Reactor     | 4,000    | 37,000                 | 16,206,000                  | 4.8                                      | 0.39                           |
| <b>Total</b> |             |          |                        | <b>32,412,000</b>           |                                          | <b>0.78</b>                    |

<sup>1</sup> Emission Factor derived from SCC Factors 3-01-018-38 Polyester/Alkyd Resins: Reactor Kettle

<sup>2</sup> An average density is assumed to be 9.25 pounds per gallon. Assume an average cook takes approximately 17 hours.

### *Thin Tanks*

| ID           | Description | Capacity |                        | Throughput (lbs)  | Emission Factor <sup>2</sup><br>(lb/ton) | Controlled PTE<br>(ton VOC/yr) |
|--------------|-------------|----------|------------------------|-------------------|------------------------------------------|--------------------------------|
|              |             | (gal)    | Lbs/Batch <sup>1</sup> |                   |                                          |                                |
| T8401        | Thin Tank   | 8,000    | 51,800                 | 22,688,400        | 6.7                                      | 0.30                           |
| T8601        | Thin Tank   | 8,000    | 51,800                 | 22,688,400        | 6.7                                      | 0.30                           |
| <b>Total</b> |             |          |                        | <b>45,376,800</b> |                                          | <b>0.61</b>                    |

<sup>1</sup> Kettle solids conservatively estimated to contain 40% VOC.

<sup>2</sup> Emission Factor derived from SCC Factors 3-01-018-39 Polyester/Alkyd Resins: Resin Thinning Tank. The emission factor for the thin tanks corresponds to lbs VOC/ton solvent. Assume 40% solvent in batch.

### *Thermaclean<sup>TM</sup> Reactors*

| ID           | Description   | Capacity |                        | Kettle<br>Throughput<br>(lbs) | Factor <sup>1</sup><br>(lb/1000 lbs) | Estimated<br>Uncontrolled PTE<br>(lb VOC/yr) |
|--------------|---------------|----------|------------------------|-------------------------------|--------------------------------------|----------------------------------------------|
|              |               | (gal)    | Lbs/Batch <sup>2</sup> |                               |                                      |                                              |
| K7700        | Reactor/Blend | 1,500    | 13,050                 | 11,431,800                    | 6.00E-04                             | 3.66E-03                                     |
| K9100        | Reactor/Blend | 2,500    | 21,750                 | 19,053,000                    | 6.00E-04                             | 6.10E-03                                     |
| <b>Total</b> |               |          |                        | <b>30,484,800</b>             |                                      | <b>9.76E-03</b>                              |

<sup>1</sup> CCP manufactures several different formulas of a low volatile cleaner referred to as Thermaclean<sup>TM</sup>. Many formulas contain up to 78% water with the primary organic ingredient being dibasic ester. An emission factor was developed using EPA Tanks 4.0. Thermaclean<sup>TM</sup> was assumed to be 100% dibasic ester. Dibasic ester has a very low vapor pressure of 0.2 mmHg at 68°F.

<sup>2</sup> Assume an average density of 8.7 lb/gal.



### Finished Resin Storage Tanks

| Tank ID      | Tank Size (gal) | Maximum Throughput (lbs) | Maximum Throughput (gals) | VOC Working Loss <sup>1</sup> (tpy) | VOC Breathing Loss <sup>1</sup> (tpy) |
|--------------|-----------------|--------------------------|---------------------------|-------------------------------------|---------------------------------------|
| 70B0650      | 6,000           | 5,049,722                | 545,916                   | 6.75E-03                            | 1.00E-03                              |
| 70B0651      | 6,000           | 5,049,722                | 545,916                   | 6.75E-03                            | 1.00E-03                              |
| 70B0652      | 6,000           | 5,049,722                | 545,916                   | 6.75E-03                            | 1.00E-03                              |
| 70B0654      | 6,000           | 5,049,722                | 545,916                   | 6.75E-03                            | 1.00E-03                              |
| 70B0655      | 6,000           | 5,049,722                | 545,916                   | 6.75E-03                            | 1.00E-03                              |
| 70B0426      | 9,458           | 7,960,045                | 860,545                   | 1.31E-02                            | 1.89E-03                              |
| 70B0425      | 9,458           | 7,960,045                | 860,545                   | 1.31E-02                            | 1.89E-03                              |
| 70S0059      | 2,500           | 2,104,051                | 227,465                   | 6.75E-03                            | 1.00E-03                              |
| 70S0064      | 2,500           | 2,104,051                | 227,465                   | 6.75E-03                            | 1.00E-03                              |
| <b>Total</b> |                 | <b>45,376,800</b>        |                           | <b>0.0735</b>                       | <b>0.0108</b>                         |

Note: Conservatively assumed that UPR is distributed evenly through 16 finished resin storage tanks.

<sup>1</sup> Calculated using EPA Tanks 4.0

### Loading Loss

| Product                | Maximum Loaded (lbs) | Maximum Loaded (gal) | Filling Pressure (psia) | Molecular Weight | Uncontrolled PTE <sup>1</sup> (tons VOC/yr) |
|------------------------|----------------------|----------------------|-------------------------|------------------|---------------------------------------------|
| UPR Tank Wagon Filling | 45,376,800           | 4,905,600            | 0.1269                  | 104              | <b>1.115</b>                                |

<sup>1</sup> Loading Loss Emissions calculated using AP-42 Section 5.2 equation 1, assuming 110°F loading temperature.

### Reactors

| HAP                 | Emission Factor (lb HAP/ton resin) | Controlled PTE (lb HAP/yr) | Controlled PTE (ton HAP/yr) |
|---------------------|------------------------------------|----------------------------|-----------------------------|
| Ethylbenzene        | 0.0021                             | 0.684                      | 3.42E-04                    |
| Ethylene Glycol     | 0.0081                             | 2.633                      | 1.32E-03                    |
| Hydroquinone        | 0.0005                             | 0.151                      | 7.57E-05                    |
| Maleic Anhydride    | 1.8916                             | 613.10                     | 3.07E-01                    |
| N,N-Dimethylaniline | 0.0013                             | 0.433                      | 2.17E-04                    |
| Phthalic Anhydride  |                                    | 0.061                      | 3.03E-05                    |
| Xylene              | 0.0111                             | 3.586                      | 1.79E-03                    |

### Thin Tanks

| HAP                 | Emission Factor (lb HAP/ton resin) | Controlled PTE (lb HAP/yr) | Controlled PTE (ton HAP/yr) |
|---------------------|------------------------------------|----------------------------|-----------------------------|
| Ethylbenzene        | 1.18E-03                           | 0.3817                     | 1.91E-04                    |
| Hydroquinone        | 2.61E-04                           | 0.0845                     | 4.23E-05                    |
| Methanol            | 2.30E-04                           | 0.0746                     | 3.73E-05                    |
| N,N-Dimethylaniline | 7.46E-04                           | 0.2418                     | 1.21E-04                    |
| Xylene              | 6.18E-03                           | 2.0021                     | 1.00E-03                    |

### Loading Loss

| HAP                 | Emission Factor<br>(lb HAP/lb VOC) | Uncontrolled PTE<br>(lb HAP/yr) | Uncontrolled PTE<br>(ton HAP/yr) |
|---------------------|------------------------------------|---------------------------------|----------------------------------|
| Ethylbenzene        | 4.39E-04                           | 0.9797                          | 4.90E-04                         |
| Methanol            | 8.59E-05                           | 0.1915                          | 9.58E-05                         |
| N,N-Dimethylaniline | 2.78E-04                           | 0.6205                          | 3.10E-04                         |
| Xylene              | 2.30E-03                           | 5.1385                          | 2.57E-03                         |
| Hydroquinone        | 9.73E-05                           | 0.2169                          | 1.08E-04                         |

### Resin Production VOC Summary

| Source              | VOC Emissions (tpy) |
|---------------------|---------------------|
| Reactors            | 0.78                |
| Thin Tanks          | 0.61                |
| ThermaClean™        | 9.76E-03            |
| Resin Storage Tanks | 0.0843              |
| Loading Loss        | 1.115               |
| <b>Total</b>        | <b>2.595</b>        |

### Resin Production HAP Summary

| HAP                 | Potential Emissions (tpy)* |
|---------------------|----------------------------|
| Ethylbenzene        | 1.02E-03                   |
| Ethylene Glycol     | 1.32E-03                   |
| Hydroquinone        | 2.26E-04                   |
| Maleic Anhydride    | 3.07E-01                   |
| Methanol            | 1.33E-04                   |
| N,N-Dimethylaniline | 6.48E-04                   |
| Phthalic Anhydride  | 3.03E-05                   |
| Xylene              | 5.36E-03                   |

### Powder Coating Production

#### Reactors

| ID           | Working Capacity (gal) | Maximum Throughput <sup>4</sup><br>(lbs/batch) | Maximum Batches/yr | Maximum Throughput<br>(lbs) | Emission Factor <sup>2</sup><br>(lb VOC/ton resin) | Controlled PTE <sup>3</sup><br>(tons VOC/yr) |
|--------------|------------------------|------------------------------------------------|--------------------|-----------------------------|----------------------------------------------------|----------------------------------------------|
| K8000        | 3,170                  | 34,870                                         | 313                | 10,914,310                  | 4.8                                                | 0.2619                                       |
| K8100        | 6,610                  | 72,710                                         | 274                | 19,922,540                  | 4.8                                                | 0.4781                                       |
| <b>Total</b> |                        |                                                |                    | <b>30,836,850</b>           |                                                    | <b>0.7401</b>                                |

<sup>1</sup> K8100 - Typical batch cycle time is 32 hours (kettle time 24 hrs; drop to flaking belt 8 hrs). K8000 - Typical batch cycle time is 28 hours (kettle time 24hrs; drop to flaking belt 4 hrs).

<sup>2</sup> Emission Factors derived from: SCC Factor 3-01-018-38 Polyester/Alkyd Resins: Reactor Kettle (4.8 lbs VOC/ton product).

<sup>3</sup> Reaction Kettles are vented to the existing thermal oxidizer which has design efficiency >98%.

<sup>4</sup> Based on an average kettle density of 11.0 pounds per gallon (reviewed 61% of 2004 production).

### Cooling/Flaking Belt

| ID       | Maximum Throughput (lbs resin/hour) | Maximum Batches/yr | Maximum Throughput (lbs) | Emission Factor (lb VOC/hr) | Uncontrolled PTE (tons VOC/yr) |
|----------|-------------------------------------|--------------------|--------------------------|-----------------------------|--------------------------------|
| CNV-8140 | 9,912                               | 587                | 27,332,663               | 0.0441                      | <b>0.0824</b>                  |

<sup>1</sup> The flaking belt is the limiting step to total powder coatings production (flaking belt supports 2 reactors).

<sup>2</sup> Small kettle drops for a period of approximately 4 - 5 hours. Large kettle drops for a period of approximately 8 - 9 hours.

### Reactors

| HAP             | Emission Factor (lb HAP/ton resin) | Controlled PTE (lb HAP/yr) | Controlled PTE (ton HAP/yr) |
|-----------------|------------------------------------|----------------------------|-----------------------------|
| Ethylene Glycol | 0.8                                | 246.69                     | 0.1233                      |

### Powder Coating Production VOC Summary

| Source               | VOC Emissions (tpy) |
|----------------------|---------------------|
| Reactors             | 0.7401              |
| Cooling/Flaking Belt | 0.0824              |
| <b>Total</b>         | <b>0.822</b>        |

### Miscellaneous Operations

#### Blend Tank Rinsing (VOCs/HAPs)

| HAP                 | Maximum Amount Used (lbs) | Emission Factor <sup>1</sup> (lbs/ton) | Uncontrolled PTE (ton/yr) |
|---------------------|---------------------------|----------------------------------------|---------------------------|
| Styrene             | 822,913                   | 6.7                                    | 1.378                     |
| Methyl Ethyl Ketone | 39,786                    | 6.7                                    | 0.067                     |
| <b>Total</b>        |                           |                                        | <b>1.445</b>              |

<sup>1</sup> SCC 30101472: Equipment cleaning tanks and vessels

#### QA Laboratory (VOCs/HAPs)

|                     | Weight % of Pollutant | Emission Factor (lb/Gal) | Uncontrolled PTE (lb/yr) | Uncontrolled PTE (ton/yr) |
|---------------------|-----------------------|--------------------------|--------------------------|---------------------------|
| Styrene             | 32                    | 3.41                     | 2,255                    | 1.13                      |
| Methyl Methacrylate | 5                     | 0.53                     | 352                      | 0.176                     |
| Cobalt Compounds    | 2.90E-04              | 0.00                     | 0.020                    | 1.02E-05                  |
| Cumene              | 5.31E-05              | 0.00                     | 0.004                    | 1.87E-06                  |
| Misc. VOC           | 2.99                  | 0.32                     | 211                      | 0.106                     |
| <b>Total</b>        |                       |                          |                          | <b>1.410</b>              |

### Raw Material Storage Tanks

| New Tank ID  | Working Volume (gal) | Density (lbs/gal) | Maximum Throughput (lb) | VOC Working Loss Emissions <sup>1</sup> (tpy) | VOC Breathing Loss Emissions <sup>1</sup> (tpy) |
|--------------|----------------------|-------------------|-------------------------|-----------------------------------------------|-------------------------------------------------|
| 70S0108      | 35,000               | 7.53              | 30,387,138              | 1.19E-01                                      | 1.65E-02                                        |
| 70S0101      | 10,000               | 7.82              | 1,517,493               | 8.42E-02                                      | 4.42E-02                                        |
| 70S0102      | 10,000               | 7.82              | 1,517,493               | 8.42E-02                                      | 4.42E-02                                        |
| 70S0103      | 10,000               | 7.82              | 1,517,493               | 8.42E-02                                      | 4.42E-02                                        |
| 70S0140      | 21,000               | 7.25              | 49,680                  | 6.65E-04                                      | 1.12E-02                                        |
| 70S0150      | 9,828                | 7.82              | 1,491,392               | 8.42E-02                                      | 4.42E-02                                        |
| 70S7001      | 10,000               | 12.45             | 8,494,000               | 7.25E-02                                      | 9.47E-03                                        |
| 70S0147      | 10,000               | 8.65              | 693,872                 | 4.50E-05                                      | 3.50E-05                                        |
| 70S0518      | 8,500                | 8.65              | 589,791                 | 4.50E-05                                      | 3.50E-05                                        |
| 70S0519      | 8,500                | 8.65              | 589,791                 | 4.50E-05                                      | 3.50E-05                                        |
| 70S0520      | 8,500                | 8.65              | 589,791                 | 4.50E-05                                      | 3.50E-05                                        |
| 70S0733      | 15,000               | 8.4               | 8,526,493               | 6.13E-03                                      | 9.55E-04                                        |
| 70S8054      | 15,000               | 8.4               | 8,526,493               | 6.13E-03                                      | 9.55E-04                                        |
| <b>Total</b> |                      |                   | <b>64,490,920</b>       | <b>0.5419</b>                                 | <b>0.2162</b>                                   |

<sup>1</sup> Calculated using EPA Tanks 4.0

### Raw Material Loading Loss (VOCs/HAPs)

| Raw Material                  | Maximum Throughput (gal) | Filling Pressure (psia) | Molecular Weight | Filling Temperature (deg. F) | Uncontrolled PTE (lbs/yr) | Uncontrolled PTE (tpy) |
|-------------------------------|--------------------------|-------------------------|------------------|------------------------------|---------------------------|------------------------|
| Styrene                       | 4,035,476                | 0.0611                  | 104.00           | 55                           | 899.60                    | 0.4498                 |
| Methyl Methacrylate           | 772,874                  | 0.3643                  | 100.00           | 55                           | 987.75                    | 0.4939                 |
| 80% Xylene / 20% Ethylbenzene | 6,852                    | 0.0769                  | 106.17           | 55                           | 1.96                      | 0.0010                 |
| Maleic Anhydride              | 682,249                  | 0.157                   | 100.00           | 140                          | 322.54                    | 0.1613                 |
| <b>Total</b>                  |                          |                         |                  |                              |                           | <b>1.106</b>           |

<sup>1</sup> Loading Loss Emissions calculated using AP-42 Section 5.2 equation 1.

# STATEMENT OF BASIS

## **Voluntary Limitations**

In order to qualify for this Intermediate State Operating Permit, the permittee has accepted voluntary, federally enforceable emission limitations. Per 10 CSR 10-6.065(5)(C)1.A.(VI), if these limitations are exceeded, the installation immediately becomes subject to 10 CSR 10-6.065(6) and enforcement action for operating without a valid part 70 operating permit. It is the permittee's responsibility to monitor emission levels and apply for a part 70 operating permit far enough in advance to avoid this situation. This may mean applying more than eighteen months in advance of the exceedance, since it can take that long or longer to obtain a part 70 operating permit.

## **Permit Reference Documents**

These documents were relied upon in the preparation of the operating permit. Because they are not incorporated by reference, they are not an official part of the operating permit.

- 1) Intermediate Operating Permit Application, received May 25, 2005;
- 2) 2005 Emissions Inventory Questionnaire, received March 30, 2006;
- 3) U.S. EPA document AP-42, *Compilation of Air Pollutant Emission Factors*; Volume I, Stationary Point and Area Sources, Fifth Edition.

## **Other Air Regulations Determined Not to Apply to the Operating Permit**

The Air Pollution Control Program (APCP) has determined that the following requirements are not applicable to this installation at this time for the reasons stated.

### *10 CSR 10-6.100, Alternate Emission Limits*

This rule is not applicable because the installation is in an ozone attainment area.

### *10 CSR 10-6.260, Restriction of Emission of Sulfur Compounds*

This rule does not apply to Boilers #1, #2, Kettle Furnaces 84, 86, and the Hot Oil Heater (EU0010 through EU0040 and EU1400) because these units use only pipeline grade natural gas. In accordance with 10 CSR 10-6.260(1)(A)2., combustion equipment that uses exclusively pipeline grade natural gas is exempt from this regulation.

## **Construction Permit Revisions**

The following revisions were made to construction permits for this installation:

### *Construction Permit # 0397-012*

Special Condition #8 of Construction Permit #052000-007 states:

"Construction Permit Number: 052000-007 supercedes the conditions, record keeping and reporting requirements that were included in the Special Conditions of Construction Permit Number: 0397-012." Therefore, the requirements from Construction Permit Number: 0397-012 were not included in the operating permit.

### *Construction Permit #052000-007*

All special conditions of Construction Permit Amendment #052000-007A supercede the special conditions of this permit. Therefore, only the special conditions of the amendment were included.

*Construction Permit #082001-020*

Special Condition #1 of Construction Permit #082001-020 states:

“Cook Composites & Polymers Company shall control emissions from the Terephthalic acid (TPA) storage system (EP25) using baghouses as specified in the permit application.” The TPA storage system was never constructed, and therefore was omitted from the permit conditions.

**New Source Performance Standards (NSPS) Applicability**

40 CFR Part 60, Subpart D, *Standards of Performance for Fossil-Fuel-Fired Steam Generators for Which Construction is Commenced After August 17, 1971*

40 CFR Part 60, Subpart Db, *Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units*

40 CFR Part 60, Subpart Dc, *Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units*

Boilers #1 and #2 (EU0010 and EU0020) were installed in 1964, which is prior to the applicability dates for 40 CFR Part 60, Subpart D, Db and Dc. Therefore, these requirements were not included in the operating permit.

40 CFR Part 60, Subpart Kb, *Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced after July 23, 1984*

This rule applies to tanks storing VOC liquids that have a capacity greater than or equal to 75 m<sup>3</sup> (19,812 Gal). There are two vessels at this installation that fit this definition, however, in accordance with rule, both tanks are exempt from the requirements of this subpart. The Xylene Storage Tank – 21,000 Gal, (EU0230) was installed prior to July 23, 1984 and therefore is not subject to this rule. The Styrene Storage Tank – 35,000 Gal, (EU0640) has a true vapor pressure of 0.6 kPa. All vessels with a capacity greater than or equal to 75 m<sup>3</sup> but less than 151 m<sup>3</sup> storing a liquid with a maximum true vapor pressure less than 15.0 kPa are exempt from this regulation.

**Maximum Available Control Technology (MACT) Applicability**

40 CFR Part 63, Subpart HHHHH, *National Emission Standards for Hazardous Air Pollutants: Miscellaneous Coating Manufacturing*

The permittee has taken a federally enforceable permit limit for HAPs (Construction Permit #052000-007A), and therefore shall not be subject to this regulation.

**Other Regulatory Determinations**

Attachment I, *Basis for PTE calculations*

- 1) Maximum production potential of all processes at the installation, assuming the following:
  - a) Parameters submitted for the Pilot Lab in the New Source Review Permit Application Project No. 2000-08-023,
  - b) Parameters submitted for the Powder Coatings Production in the New Source Review Permit Project No. 2001-04-019,
  - c) Resin Production – Capacity of reactors (4,000 gal/reactor), estimated average density of product lines (9.25 lb/gal; reviewed 70% of production in 2004), estimated average batch time (17 hrs), unsaturated polyester resin thinned in approximately 40% solvent,
  - d) Thermaclean™ Production – Capacity of reactors (1,500 and 2,500 gallons), estimated average density of product lines (8.7 lb/gal), estimated average batch time (10 hrs),

- e) Big Batch Gel Coat Production – New Source Review Permit Project No. 1999-06-014 limits styrene emissions from Big Batch Operation to less than 12.1 tons in every consecutive 12-month period; As a result, production was distributed between process equipment in Big Batch Operation, and
  - f) Small Batch Gel Coat Production – capacity of process units, estimated average density of product lines (10.04 lb/gal), estimated average cycle time 72 hours.
- 2) Continuously operating controls on the Resin Production, 60s & 90s Big Batch Gel Coat Production and Powder Coatings Production processes (as required by Construction Permit #082001-020, #052000-007A and 10 CSR 10-2.300).
  - 3) Limiting Styrene and Methyl Methacrylate emissions below 10 tons per year (see PW001).

*10 CSR 10-6.400, Restriction of Emission of Particulate Matter From Industrial Processes*

Attachment G demonstrates continuous compliance with this rule for the Big Batch and Small Batch Gel Coat Production Areas. No monitoring or record keeping is required to ensure compliance, therefore these limits were only included as an attachment and not in the body of the permit. The rest of the emission units at the facility have a potential to emit for particulate matter of less than 0.5 lb/hr, and therefore, in accordance with 10 CSR 10-6.400(1)(B)11., are exempt from this regulation.

*10 CSR 10-2.040, Maximum Allowable Emission of Particulate Matter From Fuel Burning Equipment Used for Indirect Heating*

This rule applies to the emission units EU0010 through EU0040, and EU1090. Attachment A demonstrates continuous compliance with this rule if the permittee only uses natural gas as fuel for these units.

*10 CSR 10-2.300, Control of Emissions from the Manufacturing of Paints, Varnishes, Lacquers, Enamels and other Allied Surface Coating Products*

The condenser at this installation is not a surface condenser, but is an integral part of the process equipment for product quality, and therefore not deemed a control device. However, the thermal oxidizer was approved (December 5, 2001 letter from MDNR to Mr. John Bauer of CCP) as an equivalent control device in accordance with the rule.

**Other Regulations Not Cited in the Operating Permit or the Above Statement of Basis**

Any regulation which is not specifically listed in either the Operating Permit or in the above Statement of Basis does not appear, based on this review, to be an applicable requirement for this installation for one or more of the following reasons.

- 1) The specific pollutant regulated by that rule is not emitted by the installation.
- 2) The installation is not in the source category regulated by that rule.
- 3) The installation is not in the county or specific area that is regulated under the authority of that rule.
- 4) The installation does not contain the type of emission unit that is regulated by that rule.
- 5) The rule is only for administrative purposes.

Should a later determination conclude that the installation is subject to one or more of the regulations cited in this Statement of Basis or other regulations which were not cited, the installation shall determine and demonstrate, to the Air Pollution Control Program's satisfaction, the installation's compliance with that regulation(s). If the installation is not in compliance with a regulation that was not previously cited, the installation shall submit to the APCP a schedule for achieving compliance for that regulation(s).

Prepared by:

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Andrea D. Collier  
Environmental Engineer



CERTIFIED MAIL,  
RETURN RECEIPT REQUESTED

Mr. Michael Gromacki, Manufacturing Director  
Cook Composites and Polymers Co.  
920 East 14th Avenue  
North Kansas City, MO 64116

Re: Cook Composites and Polymers Co., 047-0012  
Permit Number:

Dear Mr. Gromacki:

Enclosed with this letter is your intermediate operating permit. Please review this document carefully. Operation of your installation in accordance with the rules and regulations cited in this document is necessary for continued compliance. It is very important you read and understand the requirements contained in your permit.

If you have any questions or need additional information regarding this permit, please me at (573) 751-4817, or write the Department of Natural Resources' Air Pollution Control Program, PO Box 176, Jefferson City, MO 65102. Thank you for your time and attention to this matter.

Sincerely,

AIR POLLUTION CONTROL PROGRAM

Michael J. Stansfield, P.E.  
Operating Permit Unit Chief

MJS: ack

Enclosures

c: Ms. Tamara Freeman, US EPA Region VII  
Kansas City Regional Office  
PAMS File: 2005-05-099

CERTIFIED MAIL, 70052570000215847027  
RETURN RECEIPT REQUESTED

Mr. Jon Schuckman  
Environmental Engineer  
Cook Composites and Polymers Co.  
920 East 14<sup>th</sup> Avenue  
North Kansas City, MO 64116

Re: Draft Intermediate Operating Permit – Project (PAMS) No: 2005-05-099

Dear Mr. Schuckman:

The Air Pollution Control Program (APCP) has completed the preliminary review of your Intermediate (Title V) permit application. A public notice will be placed in the Kansas City Sun Tribune on Thursday, January 25, 2007.

The APCP will accept comments regarding the draft permit that are postmarked on or before the closing date. It is very important you read and understand this legal document. You will be held responsible for complying with this document.

Please address comments or recommendations for changes to my attention at:

Operating Permits Unit  
Air Pollution Control Program  
P.O. Box 176  
Jefferson City, MO 65102

A copy of this draft is also being sent to the U.S. EPA's Region VII office in Kansas City for their review. The Region VII office is afforded, by law, oversight authority on any Title V permit which Missouri (or any of the other states in the

Mr. Jon Schuckman  
Page Two

region) may propose to issue. A public hearing may be held if interest is expressed by the public.

Should you have any questions, please contact me at (573) 751-4817, or write the Department of Natural Resources' Air Pollution Control Program, PO Box 176, Jefferson City, MO 65102. Thank you for your time and attention.

Sincerely,

AIR POLLUTION CONTROL PROGRAM

Andrea D. Collier  
Environmental Engineer

ADC/kdm

Enclosures

c: Ms. Tamara Freeman, US EPA Region VII  
Kansas City Regional Office  
PAMS File: 2005-05-099

Mr. Jan Sides, Director  
Kansas Bureau of Air & Radiation  
Forbes Field, Building 283  
Topeka, KS 66620

RE: Affected States Review – Notification of Proposed Final Intermediate Operating Permit

Dear Mr. Sides:

In accordance with Missouri State Rule 10 CSR 10-6.065(5)(F)1. and the Clean Air Act this letter is to notify you of public notice of the preliminary draft and request for comments for:

Cook Composites and Polymers Co. located in North Kansas City, MO 64116

Project Number – 2005-05-099

Public notice will be published in the Kansas City Sun Tribune on Thursday, January 25, 2007.

You are invited to submit any relevant information, materials, and views in support of or in opposition to the draft operating permits in writing by no later than February 24, 2007 to my attention at Missouri Department of Natural Resources, Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102.

Should you require further information or documentation on this matter, please contact the Operating Permits Unit at (573) 751-4817, or you may write to the Department of Natural Resources, Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102. Thank you for your time and attention.

Sincerely,

AIR POLLUTION CONTROL PROGRAM

Michael J. Stansfield, P.E.  
Operating Permit Unit Chief

MJS: ack

c: Ms. Tamara Freeman, US EPA Region VII  
Kansas City Regional Office  
PAMS File: 2005-05-099

For Publication on Thursday, January 25, 2007

Notice of documents available for public viewing  
Department of Natural Resources  
Division of Environmental Quality  
Air Pollution Control Program

A draft-operating permit has been issued for the following air pollution sources:

| Installation                     | City              | Project #   |
|----------------------------------|-------------------|-------------|
| Cook Composites and Polymers Co. | North Kansas City | 2005-05-099 |
|                                  |                   |             |

Activities included in these permits are all activities involved in the operation of these sources with the potential for producing regulated quantities of regulated air pollutants.

Copies of the draft permits are available for public comment. Public files containing copies of all non-confidential materials and a copy or summary of other materials, if any, considered in this draft permit, are available for public viewing at the following locations: MO Dept. of Natural Resources, Kansas City Regional Office, 500 NE Colbern Road Lee's Summit, MO 64086-4710 or by written request from the Air Pollution Control Program, Operating Permits Unit, P.O. Box 176, Jefferson City, MO 65102 (Information deemed confidential business information pursuant to Missouri State Rule 10 CSR 10-6.210, *Confidential Information*, if any exists, is not included in the public files. Emission data, as defined by this rule, cannot be considered confidential business information.)

The file is available for viewing through February 24, 2007. Citizens are invited to submit any relevant information, materials, and views in support of or in opposition to the draft operating permits in writing no later than February 24, 2007. Written comments and/or requests for public hearing should be sent to Mr. Jim Kavanaugh, Missouri Department of Natural Resources, Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102.

The Air Pollution Control Program will hold an informal public hearing after an additional 30 day comment period on the draft permit if: 1.) A timely request is made for such a hearing during the public comment period; and 2.) The person requesting the hearing identifies material issues concerning the preliminary determination and the Air Pollution Control Program determines that a public hearing will be useful in resolving those issues.

This public notice is made pursuant to Missouri State Rule 10 CSR 10-6.065, Operating Permits.

Sun Tribune  
PO Box 28100  
310 NW Englewood  
Kansas City MO 64188

Attention: Legal Ads

To Whom It May Concern:

We wish to place the attached legal advertisement in your newspaper to be run ONCE. It must run on Thursday, January 25, 2007.

We require a certified affidavit of publication to be received in our office by February 8, 2007.. Please submit the affidavit and invoice for payment to:

Attention: Cheri Bechtel  
Department of Natural Resources  
Air Pollution Control Program  
P. O. Box 176  
Jefferson City, MO 65102

If you have any questions, please contact me at (573) 751-4817. Thank you for your assistance.

Sincerely,

AIR POLLUTION CONTROL PROGRAM

Michael J. Stansfield, P.E.  
Operating Permits Unit Chief

MJS/ack

c: Cheri Bechtel, Procurement Clerk  
PAMS File: 2005-05-099

|                                                                                                                                                                                                                |                                                                                                |                                                  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|--------------------------------------------------|
| MISSOURI DEPARTMENT OF NATURAL RESOURCES<br>FOLDER TRANSMITTAL ROUTING SHEET                                                                                                                                   |                                                                                                | Document #:<br>Division Log #:<br>Program Log #: |
| DEADLINE: Date                                                                                                                                                                                                 |                                                                                                |                                                  |
| Penalty for Missing Deadline: None                                                                                                                                                                             |                                                                                                |                                                  |
| Cook Composites and Polymers Co.2005-05-099                                                                                                                                                                    |                                                                                                |                                                  |
|                                                                                                                                                                                                                |                                                                                                |                                                  |
| Originator: Andrea Collier                                                                                                                                                                                     | Telephone: (816) 622-7049                                                                      | Date:                                            |
| Typist: Karla Marshall                                                                                                                                                                                         | File Name: P:\APCP\Permits\Users\Andrea Collier\2005-05-099 Cook Composites & Polymers Co. doc |                                                  |
| FOR SIGNATURE APPROVAL OF:                                                                                                                                                                                     |                                                                                                |                                                  |
| <input type="checkbox"/> DNR Director <input type="checkbox"/> DNR Deputy Director <input type="checkbox"/> Division Director <input type="checkbox"/> Division Deputy Director    X Other: James L. Kavanaugh |                                                                                                |                                                  |
| PROGRAM APPROVAL: Approved by: _____ Program: APCP Date: _____                                                                                                                                                 |                                                                                                |                                                  |
| Other Program Approval (Section/Unit): _____ Date: _____                                                                                                                                                       |                                                                                                |                                                  |
| Comments:                                                                                                                                                                                                      |                                                                                                |                                                  |
| ROUTE TO:                                                                                                                                                                                                      |                                                                                                |                                                  |
| <input type="checkbox"/> DIVISION DIRECTOR APPROVAL: _____                                                                                                                                                     |                                                                                                | Date: _____                                      |
| Comments:                                                                                                                                                                                                      |                                                                                                |                                                  |
| <input type="checkbox"/> FINANCIAL REVIEW – DIVISION OF ADMINISTRATIVE SUPPORT:                                                                                                                                |                                                                                                |                                                  |
| DAS Director: _____                                                                                                                                                                                            |                                                                                                | Date: _____                                      |
| <input type="checkbox"/> Fee Worksheet Received By: _____                                                                                                                                                      |                                                                                                | Date: _____                                      |
| Accounting: _____                                                                                                                                                                                              |                                                                                                | Date: _____                                      |
| Budget: _____                                                                                                                                                                                                  |                                                                                                | Date: _____                                      |
| General Services: _____                                                                                                                                                                                        |                                                                                                | Date: _____                                      |
| Internal Audit: _____                                                                                                                                                                                          |                                                                                                | Date: _____                                      |
| Purchasing: _____                                                                                                                                                                                              |                                                                                                | Date: _____                                      |
| Comments:                                                                                                                                                                                                      |                                                                                                |                                                  |
| <input type="checkbox"/> LEGAL REVIEW:                                                                                                                                                                         |                                                                                                |                                                  |
| <input type="checkbox"/> General Counsel: _____                                                                                                                                                                |                                                                                                | Date: _____                                      |
| <input type="checkbox"/> AGO: _____                                                                                                                                                                            |                                                                                                | Date: _____                                      |
| Comments:                                                                                                                                                                                                      |                                                                                                |                                                  |
| <input type="checkbox"/> DEPARTMENT DIRECTOR APPROVAL: _____                                                                                                                                                   |                                                                                                | Date: _____                                      |
| Comments:                                                                                                                                                                                                      |                                                                                                |                                                  |
| <input type="checkbox"/> NOTARIZATION NEEDED                                                                                                                                                                   |                                                                                                |                                                  |
|                                                                                                                                                                                                                |                                                                                                | INITIALS/DATE                                    |